



## Smoke-free schools? Results of a secondary school smoking policies survey 2002

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### Abstract

**Aim** To describe the cigarette-smoking policies of a sample of New Zealand secondary schools.

**Methods** Schools randomly selected from six geographical regions for participation in the Health Sponsorship Council's 2002 Youth Lifestyle Study (YLS) were invited to also participate in the School Smoking Policies Survey (SSPS).

**Results** Eighty one of 82 schools responded (response rate 98.8%); 64 schools (79.0%) provided copies of smoking policies. Of the schools that provided policies, only 31 (50.8%) were totally smoke free, ie, banned smoking 24 hours a day, seven days a week. Five schools (8.2%) were both smoke free and fully compliant with existing legislation. Seventy eight schools (96.3%) provided education about smoking and imposed sanctions on students caught smoking. Most respondents (74.1%) considered school staff would support proposed changes to the Smoke-free Environments Act that would make all school buildings and grounds totally smoke free.

**Conclusions** Most secondary schools are not smoke free, but most staff are likely to support smoke-free status. Existing inconsistency among educational messages, school practice and staff actions may undermine tobacco-smoking-prevention efforts. Proposed strengthening of smoke-free legislation is both timely and necessary to ensure that all New Zealand students are provided with totally smoke-free school environments, consistent with health education messages.

School attendance is compulsory in New Zealand for youth between the ages of 6 and 16 years.<sup>1</sup> This is of particular relevance for health promotion activities as young people are attending school during a formative period of development,<sup>2</sup> and schools provide excellent opportunities for promoting healthy behaviours.<sup>3,4</sup> Ideally, schools provide a learning environment that both implicitly and explicitly supports accepted healthy norms.<sup>5</sup> This is demonstrated within formal curricula,<sup>6</sup> and through the school environment, via policies and practices aimed at curbing health-risk behaviour, for example, school policies on cigarette smoking.

Despite the potential for health promotion in school environments, many health-risk behaviours are common among adolescents. One of these behaviours, tobacco use, is of particular concern. Although prevalence in cigarette smoking decreased in a sample of New Zealand fourth-form students (ages 14 and 15 years) from 1999, 16% of males and 22% of females reported at least weekly smoking in 2001.<sup>7</sup> Among females, more Maori (42%) than non-Maori (18%) smoked at least weekly. Attendance at secondary school, although potentially a time for healthy activities, is also a period when most cigarette smokers begin smoking.<sup>8-10</sup> It is likely that this

paradox is due to a number of factors, including an age-related sensitivity to marketing (for example, through the placement of tobacco products in movies)<sup>11</sup> and the observed behaviour of peers, parents, and other adults smoking.<sup>12-15</sup> The causality of youth tobacco smoking is multifaceted and not limited to school factors alone;<sup>16</sup> nevertheless, school factors can provide both positive and negative influences on youth smoking. For example, a significant protective association between enforced school smoking restrictions and pupils smoking has been reported.<sup>17,18</sup> The prevalence of smoking at school and daily and weekly smoking were inversely related to the strength and enforcement of the policy.<sup>19</sup> Conversely, despite the strength of policy, schools where policies were not enforced demonstrated a greater risk of students smoking daily.<sup>20,21</sup> Other studies identified inconsistencies in messages regarding cigarette smoking, with students being taught the dangers of tobacco use, but receiving a different message from the observation of members of staff smoking.<sup>14</sup>

Workplace-based legislation was introduced in New Zealand in 1990 to help reduce the exposure of non-smokers to second-hand smoke, regulate tobacco marketing, and monitor tobacco products.<sup>22</sup> Employers were required to provide protection to non-smoking employees. New Zealand schools are governed by boards of trustees, which as the employers are obligated to develop, in consultation with employees, a written policy on smoking and to display it prominently. Further, employers must ensure that prominent signs are erected to indicate where smoking is, and is not, permitted. Existing legislation applies only to indoor environments and does not contain specific provisions for education institutions. The Smoke-free Environments (Enhanced Protection) Amendment Bill 1999 is currently under review. There is a proposal to prohibit smoking on school premises.

The smoke-free status of New Zealand primary and intermediate schools has been described by Reeder and Glasgow (2000).<sup>23</sup> That study found variable compliance with legislation and inconsistency in smoke-free status in a national, random sample of 209 schools. Comparison of policy detail and questionnaire responses indicated overestimation by school respondents of the smoke-free status of their school. On a positive note, only 20% of respondents thought that school staff would not support changes to legislation that would require all schools to become totally smoke free.

Given the potential of schools to promote healthy behaviour through positive role-modelling, health education programmes, enforcement of smoke-free policies, and the provision of a smoke-free environment, the specific aim of the current study is to describe cigarette-smoking policies of a sample of New Zealand secondary schools. Additionally, the study aims to assess current compliance of schools with the Smoke-free Environments Act 1990, and to identify any need to strengthen legislation and enforcement.

## Methods

**Sample** The School Smoking Policies Survey (SSPS) was conducted in conjunction with the 2002 Health Sponsorship Council's Youth Lifestyle Study (YLS), a biennial study of Year 10 and Year 12 students. Multi-stage cluster sampling was used for the 2002 YLS. Six geographical regions were selected to represent both the North and South Islands of New Zealand. Randomly selected secondary schools that agreed to participate in the YLS were subsequently invited to participate in the SSPS. The YLS also included the random selection of school classes and the assignment of probability weights at the individual student level, but this is not relevant to the study reported here, which focused on school-level, rather than student-level, factors. One hundred and forty one eligible schools were invited to

participate in the YLS, 82 agreed (response rate 58.2%), and 81 of these also agreed to participate in the SSPS.

**Procedures** The SSPS was conducted in two waves, with the first in May 2002. At the time that the study was conducted, high student absence rates were recorded in some classes which affected the YLS, though not the SSPS. For this reason, in November 2002 ten further schools were randomly selected for the YLS and sampled in the second wave of the study.

Participating schools were asked to nominate a contact person and generally this was the Principal, Assistant Principal, or Health Education staff. Questionnaires and reply-paid envelopes were either hand delivered or mailed to a named school representative during May or November 2002. Non-respondents were reminded with further copies of the letter and questionnaire, via post and email. In the first wave reminder letters were posted to the school after a two-week interval, and in the second wave after a one-week interval, due to impending Christmas closure.

**Measures** The SSPS consisted of two sections. The first section contained five questions about smoke-free policies and practices (Table 1), adapted from an earlier study of primary and intermediate schools.<sup>23</sup> The second section of the survey contained six questions regarding smoke-free educational programmes (Table 3). For each of these questions there were additional responses. For example, for question 1, if respondents answered 'yes', further questions included '*in the general health and physical education curriculum*', or '*in specific programmes (please specify programmes and student years given, eg, year 10)?*'

School demographic data, including school decile rating and school composition, were obtained from the Ministry of Education database. School composition describes the levels of education at the school: composite schools provide education at primary, intermediate, and secondary levels; year 7–13 schools provide education at intermediate and secondary level; and year 9–13 provide secondary education only. School deciles are calculated to reflect the socioeconomic status of the community in which the school is situated, using census and school data and including household income, parental qualifications, and ethnicity. A low decile rating reflects a low socioeconomic status of the contributing community. Deciles are ranked from 1 (lowest) to 10 (highest).

**Analysis** SSPS and school smoking policies data were coded and entered into STATA (STATA Corporation, Texas, USA, 2001).

## Results

Eighty one schools returned completed questionnaires (98.8% of the 82 participating in the 2002 YLS). One school refused to participate in the SSPS, citing 'excessive research' within their school. Sixty four schools (79.0%) included copies of their school smoking policy; one additional policy was obtained from the school web site. Thirty seven schools (45.7%) were decile 1–5, the remaining 44 schools (54.3%) were decile 6–10. The school that refused to participate was a decile 2, year 7–13 school. Most (71.6%) of the participating schools were year 9–13 schools, the remainder were year 7–13 schools (18.5%) and composite schools (9.9%). Nationally, 52.0% of schools are year 9–13, 19.5% year 7–13, and 27.3% are composite schools.

In compliance with current legislation, most schools (87.7%) reported having a current, written school smoking policy, but only 21 (25.9%) had that policy on display. A number of respondents noted that the policy was available within policy folders. Of those schools for which a copy of the school smoking policy was available (n = 65), 7.7% related only to students and were, therefore, inconsistent with workplace smoke-free legislation. Most policies specified school buildings (93.8%) and grounds (90.8%), fewer specified school events outside of the school environment (47.7%), use of school premises by other groups (43.1%), and students in uniform (35.4%). In compliance with current legislation, 56.9% of school policies included guidelines regarding 'non-smoking' signage. Under the Smoke-free Environments Act 1990 places of employment are also required to have a process for addressing complaints included in their smoking policy. This was the case for 36 (55.4%) of the school policies.

Although 41 (63.1%) respondents who returned copies of school policies claimed their schools were totally smoke free, five (12.2%) of these schools had areas or times where smoking was allowed. The majority of school staff surveyed appeared to support changes to strengthen legislation (n = 60, 74.1%), data were missing for five schools (Table 1).

**Table 1. Secondary school smoke-free policies and practices – frequency and percentage of ‘yes’ responses (n = 81)**

	<b>Policies and practice</b>	<b>n</b>	<b>% of total</b>
1	Does your school have a current written policy on smoking in the school?	71	87.7
2	If yes (to question 1), is the policy on display, for example, in the staff room?	21*	25.9
3	Some schools have become totally smoke free in all school buildings. Has your school done this?	65	80.2
4	Some schools have become totally smoke free both on all school grounds and in all school buildings. Has your school done this?	44 <sup>†</sup>	54.3
5	Do you think your school staff would support government legislation making all schools totally smoke free in buildings and grounds?	60 <sup>‡</sup>	74.1

\*data missing for 11 schools; <sup>†</sup>data missing for 2 schools; <sup>‡</sup> data missing for 5 schools

Policies and survey responses were further analysed to classify the smoke-free status of each school according to four levels (Table 2). In order to be classified as ‘compliant’ schools needed to display a written smoking policy that included details of signage and complaints procedures. A smoke-free environment was defined as one in which smoking was not allowed within the school buildings or grounds at any time by any person.

**Table 2. Smoke-free status of participating schools**

<b>Smoke-free status</b>	<b>Compliant with legislation</b>	<b>Smoke-free environment</b>	<b>n</b>	<b>%</b>
Level 1	Yes	Yes	5	8.2
Level 2	No	Yes	26	42.6
Level 3	Yes	No	2	3.3
Level 4	No	No	28	45.9
Total			61*	100.0

\*data from four schools were missing for either the compliance or smoke-free environment variables

In Table 2, for example, level 1 schools were compliant with current legislation and totally smoke free, ie, there were no designated smoking areas within the school buildings or grounds.

Virtually all schools provided some education on smoking (96.3%, n = 78), usually within the Health and Physical Education curriculum (Table 3).

**Table 3. Secondary school educational programmes – frequency and percentage of ‘yes’ responses**

	<b>Educational programmes</b>	<b>n</b>	<b>%</b>
1	Is health education about cigarette smoking given in your school?	78	96.3
2	Does your school take part in external programmes that involve education about cigarette smoking from organisations outside the school (for example, DARE)?	35	43.2
3	Are students able to access health information or advice at school?	81	100.0
4	Has your school participated in any Smoke-free and/or Auahi Kore* events in the last year (12 months)? <sup>†</sup>	74	91.4
5	Are smoking cessation programmes for students offered by the school?	45	55.6
6	If students are found smoking in school grounds or buildings are they subject to any sanctions?	78	96.3

DARE = Drug Abuse Resistance Education

\*Auahi Kore = Smoke-free; <sup>†</sup>eg, Aotearoa Maori performing arts festival, Nga Manu Korero (Maori speech competitions), Smokefree Maui Warrior, Smokefree Pacifica Beats, Smokefree Stage Challenge

Additional programmes were offered by 38 schools (46.9%) and these were either included in a particular subject, such as science, or presented as a ‘special topic’.

Schools also promoted smoke-free environments through sanctions imposed on students caught smoking tobacco. Policies differed as to the extent of sanctions and the degree of responsibility the school accepted for student behaviour. For example, some schools restricted sanctions to those students caught smoking within school premises; whereas other schools included all times that a student was wearing school uniform. Most (96.3%) schools imposed some sanctions and almost half (45.7%) had structured processes for doing this. Usually, these processes were documented in policies and structured so that students received increasingly ‘harsher’ sanctions each additional time they were caught. Some schools had both smoking exemptions (that is, places or times when staff or visitors were allowed to smoke) and structured sanctions for students caught smoking (n = 10). Other schools had unstructured sanctions where the situation or circumstance of smoking (for example, being in the presence of other people smoking) was not clearly defined, and where action taken by the school did not appear to follow a clear process. ‘Anti-smoking education’ was often cited as a sanction for young people caught smoking (43.2%). This included the requirement to watch ‘anti-smoking’ videos, copy out ‘anti-smoking’ material, complete assignments on smoking and attend smoking-cessation courses. Access to cessation programmes was offered by 55.6% of schools. In some schools these courses were run by school staff, for example, by guidance counsellors or health staff (53.3%). In other schools, students were referred to external cessation programmes.

## **Discussion**

The current study aimed to describe cigarette-smoking policies from a sample of New Zealand state or state-integrated secondary schools, and to assess these schools’ compliance with existing smoke-free legislation. Despite legislation that requires a written smoking policy to be developed in all workplaces after consultation with employees, more than 10% of New Zealand schools do not appear to have such a policy.

In addition to obligations as an employer, schools are required to provide health education for students. Reviewed literature suggests that the successful provision of health education regarding tobacco use requires consistency in health promotion messages. The ability of students to observe school staff smoking compromises health messages.<sup>17,18</sup> The results in Table 2 suggest that only a small number of New Zealand schools provide an environment that is both compliant with legislation and completely smoke free. Furthermore, the provision of an effective smoke-free environment requires enforcement. It is insufficient to have a policy that is not enforced. In the present study, most schools sanctioned students caught smoking, but sanctions against students varied considerably between schools. Some policies were very specific and included both the definitions of behaviour that would be sanctioned and the process for doing this. Actual enforcement of smoking policies (including sanctions) could not be assessed in the present study. Further research is required in this area and in adolescent cessation.

After removing those schools that claimed to be smoke free but had exemptions for staff smoking, only 53.8% of surveyed schools provided a totally smoke-free environment. In contrast, 74% of respondents supported changes to strengthen smoke-free legislation that would require schools to be smoke free.

Overall, apart from policy display, there was a similar pattern of findings for secondary schools to those reported earlier by primary and intermediate schools.<sup>23</sup> Compared with primary and intermediate schools (in brackets) 88% (97%) secondary schools reported that their school had a written policy, 25% (49%) that the policy was on display, 80% (82%) that buildings were smoke free, although only 54% (54%) were totally smoke free in buildings and grounds, and 74% (62%) that staff would support strengthening of the smoke-free legislation to make schools totally smoke free.

The 1996 New Zealand Census demonstrated that only 8.8% of secondary school teachers were current smokers (compared with 23.9% of the general adult population); additionally, over two thirds of teachers (67.3%) had never smoked, compared with 47.3% of the general adult population (data commissioned from Statistics New Zealand, 2003, Ref No C13400SK). The low prevalence of smoking among teachers reduces the barriers against achieving smoke-free school status; nevertheless, the introduction of the amended legislation will increase the need for cessation and support services to be available for all school staff.

A potential limitation of this study is the reliance on information provided by one staff member from each school; however, as it is a requirement that all staff are made aware of the policy on smoking, this should not be a limitation in measuring compliance. The study sampling procedure differed from that used for an earlier study,<sup>23</sup> primarily to allow matching of school-level data with student-level data from the YLS. Consequently, the sampling procedure resulted in randomly selected schools, which had already consented to participate in the YLS, being invited to participate in the SSPS. This procedure may have introduced bias into the participation in the SSPS but will allow subsequent analysis of the relations between school-level variables and the prevalence of cigarette smoking among New Zealand youth.

In view of the low rate of totally smoke-free environments found in the current study (more than 10 years after smoke-free legislation), and the potential effect on youth health, we believe the proposed strengthening of the Smoke-free Environments Act is justified and desirable. Future research, which measures ongoing compliance with the legislation, will enable assessment of the effect of legislation and policy on youth smoking prevalence.

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Analysis of the smoking status of teachers from the 1996 Census was undertaken on our behalf by Statistics New Zealand.

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