preventive health check up with a key target group—women.

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A new health education strategy to reduce smoking among young people

EDITOR.—Routine anti-smoking advice from a physician has been shown to increase the cessation of smoking in adults by about two percentage points compared with controls.^{1,2} However, to date, research using this approach has concentrated on adult smokers. We investigated the likely impact of an equivalent approach with adolescents. As young people are the least likely to use medical services,³ the intervention was in the form of an age-appropriate letter from a general practitioner.

Our intervention was directed at children of 12–14 years, an age when the rate of increase in regular smoking is highest.⁴ Participants were 192 patients (101 boys (53%)) from five metropolitan general practices in Perth, Western Australia. On their birthday, participants were sent a personalised letter that combined a health message and birthday greeting. They were assigned randomly within age strata to receive either a letter on smoking or one on a control topic. The letters on smoking contained information about the dangers of smoking and the benefits of not smoking.

The control letters had information on immunisation (12th birthday), minimising exposure to the sun (13th birthday), or dietary information (14th birthday). We conducted follow-up telephone interviews about six weeks after each child's birthday.

Given the exploratory nature of the project, the assessments were firstly of the recollection of having received a letter, and secondly, of recall of its main topic. Naming the main health topic counted as successful recall—for example: "It was about smoking"; or "About diet and what to eat"—but just recalling the birthday greeting did not.

The table shows the numbers of each type of letter sent out, interviews completed, and the number in each group who correctly identified the main topic. There were no significant differences between the six groups ($F(5, 113) = 0.91$, $p > 0.05$) or between the experimental and control interventions ($F(1, 113) = 2.06$, $p > 0.05$) in the intervals between birthday and interview date.

From 192 letters sent, 114 (59%) telephone interviews were completed. There were eight refusals by either the parent or young person, on seven occasions the letter had been intercepted by a parent, and in 43 cases the telephone number (or address) was incorrect or multiple calls were not answered. In 21 instances the letter was not received. There were no significant differences between the groups in the proportion of people for whom an interview was conducted ($\chi^2 = 3.00$, $df = 5$, $p = 0.70$).

Of those interviewed, 98 (86%; 95% confidence interval (CI) = 80% to 92%) remembered having received a letter from their doctor and 75 (66%; 95% CI = 57% to 75%) were able to describe the main health topic. Following a prompt, a further five people remembered receiving it, with three recalling the main topic. Overall 78 (68%; 95% CI = 59% to 76%) were able to describe the main message of the letter.

Across the age groups, 87% (95% CI = 78% to 96%) of those receiving a letter about smoking correctly named the topic whereas only 51% (95% CI = 38% to 64%) correctly identified the other letters, a highly significant difference ($\chi^2 = 17.48$, $df = 1$, $p < 0.0001$). Eighty-four people said that they read the entire letter (75%; 95% CI = 68% to 83%) and 48% (95% CI = 39% to 57%) still had the letter.

Receiving a personal letter from their family doctor was more memorable than earlier focus groups had envisaged, with over two-thirds of those interviewed able to name the main health topic six weeks later. However, this is likely to be an over-estimate of the magnitude of the effect as those who agreed to be interviewed may have been the most receptive to a letter from their doctor.

Recall of letters about smoking was significantly more likely than recall of the control letters. The reason for this difference is unclear but the former may have been more applicable to adolescents than were the latter.

For example, it is unlikely that 12-year-olds were making decisions about immunisation. Yet, this is not the case with diet or sun safety. Outside parental supervision, these behaviours are at least as open to independent actions as smoking, given that they are licit behaviours. All four of the health topics involved in this study had been the subject of local television campaigns.

Having family doctors send letters to their young patients encouraging them not to smoke appears to have considerable potential. Given its simplicity and low cost, this strategy warrants systematic testing in a larger controlled trial with the proportion of regular smokers at an appropriate follow-up point as its principal outcome. Unfortunately, the definitive trial cannot be conducted in Perth as too few general practitioners have computerised record systems that would allow easy identification of all young teenagers who consult the practice.

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The tobacco industry and education and science organisations in New Zealand

EDITOR.—The New Zealand Smoke-Free Environments Act 1990 bans most forms of tobacco advertising and of sponsorship (Ss 22–28 as amended). Nevertheless many other forms of association between the tobacco industry and New Zealand organisations are possible, including investment and unpublicised funding.

Links with other organisations may help provide the tobacco industry with legitimacy, information, contacts, influence, and investment funds. Association with education and science is particularly prized by the industry.^{1–3} Of the forms of association possible, research funding by the tobacco industry is one of the points of contention.^{2,4,5} The debate on funding is part of a wider discussion about the relationship between business and science. The debate is influenced by new information on tobacco industry practices,⁶ the shift by the industry in some countries towards indirect promotion,³ and the move away from attempts to promote health by cooperation with the industry.⁷ These and other elements are in

Number and recall of each type of letter. Recall interval is the gap between birthday and interview dates

Age	Health message	Letters sent n	Completed interviews n (%)	Correctly identified topic % (95% CI)	Recall interval Mean days (range)
12	Smoking	33	16 (48)	88 (71–100)	43 (39–47)
12	Immunisation	31	17 (55)	47 (23–71)	42 (39–46)
13	Smoking	30	18 (60)	83 (66–100)	42 (40–52)
13	Sun exposure	32	20 (63)	45 (23–67)	42 (39–50)
14	Smoking	33	21 (63)	90 (78–100)	43 (40–52)
14	Diet	33	22 (67)	59 (39–80)	42 (38–47)

CI = confidence intervals.

some places changing expert⁸ and public opinion on associations with the tobacco trade.

To investigate local attitudes on such relationships, I made a preliminary study of the policies of universities and selected government agencies in New Zealand. In November and December 1997 I contacted four government ministers and the seven New Zealand universities by letter. They were asked if they had, or intended to have, policies on the association of their organisations with tobacco-related businesses. The minister of health was asked about his ministry's advice to other parts of government, regarding the association of educational and scientific bodies with tobacco-related companies.

The replies generally indicated a lack of policy. Of the seven universities contacted, five (Auckland, Lincoln, Massey, Otago, and Victoria University of Wellington) said they had no formal policies on associating with tobacco-related businesses. However Otago was "unaware of any involvement or interaction with the tobacco industry, either current or in the past". Waikato University said it "would not agree to be associated with any research which was not in the public interest". Canterbury University stated that they "did not accept funds from tobacco companies and have little contact or association with them" and "the University does not invest in tobacco companies".

The Ministry of Education, for its minister, stated that "the Government does not have any formal policies relating to the association of education institutions and tobacco companies". The minister of research, science and technology wrote that his ministry "has no policies . . . regarding the association of science research bodies with tobacco-related companies or organisations". The minister for Crown Research Institutes (CRIs) also had no relevant policies, but

wrote that he was advised "that no CRI has undertaken research for any tobacco-related or cigarette manufacturing company for at least three years. CRIs would not usually undertake contracted work if it created a potential conflict of interest with other work." The associate minister of health referred to the comments of the minister for CRIs, and endorsed them.

One of the directions for tobacco control work is the isolation of the tobacco industry from its support bases. A step towards this could be the formation, by organisations, of policies on their association with the industry. These policies could cover issues such as investment ties,⁹ the shared employment of people with the industry,¹⁰ and the public auditing of any research proposal involving tobacco industry funds.

The policies would serve several purposes. At a general level they would recognise the implications of involvement with an industry whose product is addictive and commonly fatal when used as the makers intend. More specifically the policies would counter some of the potential or present effects of misuse by the industry of the scientific,^{11 12} artistic, legal, and political processes.^{13 14} Those institutions that receive tobacco industry funding, or share people and resources with the industry, risk being perceived as less likely to oppose tobacco use. There is a further risk that research funding may be used to divert attention from tobacco dangers, or to help create doubt about those dangers.

Perhaps most importantly, a lack of adequate policy also exposes organisations to the risk that the industry will use linkages with them to promote its own respectability, credibility, legitimacy, and "innocence by association".² Such use of association can be crucial, as "both the uptake and the continuance of smoking are influenced very strongly by societal norms, and these norms are influ-

enced by the perceived position that tobacco companies hold in society".¹⁵

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Smokes in the movies. Nick Nolte, as detective Jack Cates in the 1982 movie "48 Hours" (left), and as villain Jake McKenna in Oliver Stone's 1997 thriller "U turn" (right).