

LETTERS TO THE EDITOR

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Support from retailers for tightening the Western Australian Tobacco Control Act 1990

EDITOR.—In 1996, 29% of 12-17 year old smokers in Western Australia were able to purchase cigarettes from a retail outlet despite the Western Australia Tobacco Control Act (1990) prohibiting the sale and supply of tobacco products to persons under the age of 18 years.^{1,2} The fines imposed on retailers prosecuted under the Act (\$A5000 and \$A20 000 maximum for an individual retailer and a corporate body, respectively) have not deterred retailers from selling cigarettes to minors, suggesting additional measures are needed to reduce adolescent access to cigarettes. We conducted a postal survey to determine the level of support among owners and managers of retail outlets in Western Australia for making it illegal for minors (under 18 years of age) to sell cigarettes and other tobacco products, removing all indoor point-of-sale advertising and having to store cigarettes and other tobacco products out of sight, under the counter.

We chose a random sample of 630 from the 4120 eligible retail outlets in Western Australia listed in the current online Australian Yellow Pages directory. We telephoned each outlet to verify that it was still in business, obtain the name of the owner and manager of the outlet, and confirm willingness to receive the survey.

Consenting owners or managers were asked to complete a 25 item questionnaire regarding their level of support using five point Likert scales ("strongly agree" to "strongly disagree"). In view of anecdotal reports of tobacco companies underwriting the cost of re-fitting shops in return for guaranteed access to a significant proportion of the display area, we asked whether each outlet had received an offer of this kind. We also sought respondents' age, sex, country of birth, and smoking status.

Of 446 (70%) outlets agreeing to participate, 236 (53%) returned a questionnaire, yielding a 37% response from our original sample. The majority of respondents (71%) felt that cigarettes and other tobacco products were important in attracting passing trade, and 88% reported that, at least half of the time, someone buying cigarettes in the shop would also buy something else. Twenty eight per cent of the outlets had been approached by a tobacco company with an offer to meet the costs of remodelling the display and counter area. Petrol stations and food/general stores were approached more often than the other types of outlets ($\chi^2 = 17.2$; $df = 4$; $p = 0.002$).

Almost half (46%) of respondents were in favour of making it illegal for minors to sell cigarettes and tobacco, with an additional 18% undecided. Respondents born outside

Australia (36%) were more likely to support this suggested change ($\chi^2 = 11.4$; $df = 4$; $p = 0.02$). Responses were similar for owners and managers, and across categories of smoking status and sex of the respondent.

One third (34%) of respondents were in favour of removing point-of-sale advertising and an additional 19% were undecided. There was little support for storing cigarettes and other tobacco products under the counter (13%).

The considerable support among owners and managers for removing all indoor (point-of-sale) advertising and making it illegal for minors to sell cigarettes is particularly noteworthy. As retailers perceive that tobacco products are important in attracting passing trade, it seems they place a premium on being able to sell cigarettes over and above being permitted to advertise them. Rather, the tobacco companies must feel it is necessary to advertise at the point-of-sale, thus exposing the whole community, young as well as old, non-smokers as well as smokers, to a message that cigarettes are a normal part of life. We have confirmed that tobacco companies do make offers to meet the costs of refitting shops, with anecdotal reports that they seek, in return, preferential rights to display their products. The reasons behind the low level of support for storing cigarettes and other tobacco products under the counter were not explored, but might include the high cost for remodelling the counter area of shops to accommodate additional storage space for tobacco products.

While further studies should be conducted to verify our results, there is already a foundation on which to build support among retailers for strengthening tobacco control legislation in Western Australia.

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- 1 Public Health Division, Health Department of Western Australia, the Centre for Behavioural Research in Cancer, Anti-Cancer Council of Victoria. *Cigarette consumption among Western Australian school students in 1996*. Perth: Development and Support Branch, Public Health Division, HDWA; 1998.
- 2 Stead M, Hastings G, Tudor-Smith C. Preventing adolescent smoking: a review of options. *Health Educ J* 1996;55:31-54.

Origins of "denicotinised" tobacco

EDITOR.—It has been known for more than 150 years that nicotine is the chemical in tobacco that is responsible for the perceived salutary as well as the adverse effects among users. Efforts to market "denicotinised" tobacco have repeatedly failed. The 1964 report of the advisory committee to the US Surgeon General stated, "Denicotinized tobacco has not found general public acceptance as a substitute." Recently, Philip Morris Companies withdrew "Next", their low nicotine cigarette brand, because of poor sales. However, Liggett Group chief executive officer Bennett Lebow plans to market a genetically engineered "low nicotine"

tobacco in 2002 as an aid for smoking cessation. What are the origins of tobacco companies' interest in marketing low nicotine brands? The following sketch from an 1852 issue of *Scientific American*,² quoted in its entirety, sheds some light on this question:

"Great Discovery for Tobacco Smokers

It will be seen by reference to our advertising columns that a new preparation of smoking tobacco has been offered in our market, the peculiar excellence of which consists in the extraction of the poisonous qualities without affecting the fine flavor and aroma of the weed. The proprietors placed in our hands some time since a package of this tobacco for trial and we can speak from experience when we say it is a most mild and delightful article. It takes away from the antitobacco men their chief argument, for it has no nicotine in it and can be used with safety as well as pleasure by persons whose nerves are affected by smoking. For ourselves, we intend never to be without this denicotinized tobacco, and trust that its proprietors will be liberally patronized by the public. It is for sale by Bennet & Beers.—(Richmond Va.) Republican."

"When the nicotine is extracted will it be tobacco? Would we be wheat if all the starch were extracted. Nicotine gives tobacco its peculiar flavour. We should like to see what kind of tobacco this was with all the nicotine gone."

One might conclude from this piece that by 1852 tobacco companies recognised at least some of the dangers of their product, understood the "poisonous" qualities of nicotine, discovered how to remove nicotine from tobacco, and crafted an aggressive marketing effort that linked "denicotinised" tobacco and "safety", for a leading science journal of the day. Since the nicotine content of "denicotinised" tobacco has varied widely,³ one can only speculate whether Bennet & Beers—and *Scientific American*—were marketing a nicotine-free tobacco or merely a lower nicotine content product.

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- 1 US Department of Health, Education, and Welfare. *Smoking and health. Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Washington, DC: Public Health Service, 1964. (PHS Publication No. 1103.)
- 2 Anon. Great discovery for tobacco smokers. *Scientific American* 1852;7(32):250. (No author cited.)
- 3 Gottsegen JJ. *Tobacco. A study of its consumption in the United States*. New York. Pitman Publishing Corp, 1940.

How US airlines became smoke free

EDITOR.—The development of the US Federal Aviation Administration policy to prohibit smoking in both the passenger cabin and flight deck of scheduled passenger flights¹ offers lessons that may be considered in other countries and workplace settings. This policy was driven by the findings that environmental tobacco smoke (ETS) is a serious health risk to those exposed, that aircraft air quality was adversely affected by cigarette smoke, and by frequent complaints of respiratory irritation by crew and passengers.³⁻⁵ Similar concerns have been raised in other occupational settings such as

prisons.⁶ The development and implementation of the policy, however, was slowed and complicated by fears that prohibiting smoking might adversely affect pilot performance. This summary of the policy development and the cited references may be useful in other efforts to develop smoke-free workplace settings in which there are similar challenges of impaired performance and attendant safety concerns.

In 1978, a National Institutes of Health report on cigarette smoking and airline pilots concluded that while smoking itself did not have significant effects on flight safety, the adverse effects of smoke withdrawal might adversely affect pilot performance.⁷ This finding supported the exemption of the flight deck from the commercial aircraft smoking ban that was passed by the US Congress in 1989.^{8,9} Nonetheless, many airlines voluntarily developed their own policies restricting smoking on the flight decks, and the successful implementation of these policies supported the April 2000 government action to ban smoking throughout commercial aircraft. To conform to the new legislation, the office of the Secretary of the US Department of Transportation and the FAA amended their smoking policies and have published updated rulings.¹²

Scientific knowledge of the effects of smoking and nicotine withdrawal, as well as treatment options, expanded considerably after 1978,¹⁰ and in 1994 the FAA requested that the Centers for Disease Control assemble an expert panel to follow up on the 1978 report, re-examining the effects of smoking and smoke deprivation relevant to pilot performance.¹¹ The science documented in that report supports the banning of smoking that was ordered by regulators in 2000. In brief, the panel concluded that nicotine withdrawal in dependent cigarette smokers does not generally lead to cognitive and behavioural deficits until at least four hours after the last cigarette. Because more than 94% of US commercial flights are less than four hours in duration it was assumed that there would be sufficient opportunity for pilots not able to completely cease smoking to smoke before flights. Furthermore, the panel observed that nicotine withdrawal related performance deficits could be prevented using nicotine replacement medications. This knowledge and such medications were not available in 1978. The facts that less than 15% of pilots smoke and that most pilots actually reported discomfort and decreased performance as a result of ETS¹¹ provided additional support for the policy. The ideal course recommended for tobacco using pilots of longer flights was treatment for tobacco dependence to alleviate withdrawal symptoms and sustain abstinence.¹¹

Our discussions with several airlines and government regulatory agencies suggest that the policies are not yet well understood nor have they been adequately disseminated. Nonetheless, it appears that smoking restrictions on flight decks and passenger cabins are being implemented without major problems or concerns regarding safety. In practice, implementation of such policies may be increasingly manageable as the prevalence of cigarette smoking continues to decline in many sectors of the workforce. Finally, the greater range and accessibility to effective treatments for tobacco dependence and withdrawal available both with and without prescriptions should make this goal more practical.

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Competing interests: Pinney Associates Inc undertakes commissioned research from Glaxo-SmithKline on smoking cessation and related matters. JEH has a financial interest in a nicotine gum product that is under development.

- 1 US Department of Transportation. Prohibition of smoking on scheduled passenger flights. Washington, DC: Federal Aviation Administration, US Federal Register, 2000; 65(112):36776–80.
- 2 US Department of Transportation. Smoking aboard aircraft. Washington, DC: Office of the Secretary, US Federal Register, 2000; 65(112):36772–5.
- 3 US Department of Health and Human Services. *The health consequences of involuntary smoking: A report of the Surgeon General, 1986*. Rockville, Maryland: Centers for Disease Control, Office on Smoking and Health, 1986. (DHHS Publication No (CDC) 87-8398.)
- 4 National Research Council, Committee on Airline Cabin Air Quality. *The airliner cabin environment: air quality and safety*. Washington, DC: National Academy Press, 1986.
- 5 National Research Council. *Environmental tobacco smoke: measuring exposure and assessing health effects*. Washington, DC: National Academy Press, 1988.
- 6 Carpenter MJ, Hughes JR, Solomon LJ, et al. Smoking in correctional facilities: a survey of employees. *Tobacco Control* 2001;10:38–42.
- 7 Dille RJ, Domino EF, Frommer PL, et al. Cigarette smoking and airline pilots: effects of smoking and smoking withdrawal on flight performance. A report of an expert panel of consultants, 1978. Bethesda, Maryland: National Institutes of Health.
- 8 US Department of Transportation. Prohibition against smoking. Washington, DC: Federal Aviation Administration, US Federal Register, 1990;55(45):8364–68.
- 9 US Department of Transportation. Smoking aboard aircraft. Washington, DC: Office of the Secretary, US Federal Register, 1990; 55(30):4991–93.
- 10 Heishman SJ, Taylor RC, Henningfield JE. Nicotine and smoking: a review of effects on human performance. *Exp Clin Psychopathol* 1994;2:345–95.
- 11 Fiore M, Shi FY, Heishman SJ, Henningfield JE. *The effects of smoking and smoking withdrawal on flight performance: A 1994 update*. Rockville, Maryland: Centers for Disease Control and Prevention, Office on Smoking and Health, 1994.

BOOK

Book reviews and books of interest to "Tobacco Control" should be sent to the editor at the address given on the inside front cover

A critique of nicotine addiction

A critique of nicotine addiction. Hanan Frenk, Reuven Dar. Boston: Kluwer Academic Publishers, 2000.

Although there have been comprehensive reviews of the evidence for the existence of

nicotine dependence (for example, the 1988 Surgeon's General report and the 2000 Royal College of Physician's report), and there have been brief articles citing evidence contrary to the existence of nicotine dependence (for example Robinson, *Psychopharmacology* 1992;108:397), I am unaware of a prior comprehensive review of evidence contrary to nicotine dependence as done in this book. The book is the work of two PhD scientists at Tel-Aviv University. It lists no acknowledgment of funding and does not specifically state whether tobacco industry funding was or was not involved.

The book does not waste time on peripheral matters but focuses on the central tenets of nicotine dependence—that is, nicotine reinforcement, withdrawal, compulsion, and regulation. Much of the book is a methodological critique of the studies cited as evidence of nicotine dependence. For example, the book states animal self administration studies are inadequate because they did not show unfacilitated initiation of self administration, excluded negative results, and failed to control for non-specific increases in lever pressing due to the stimulant effects of nicotine. It also criticises human self administration studies for inadequate blinding, excluding negative results and small sample sizes. The book also maintains that nicotine abstinence has not been shown to be aversive and thus cannot be a motivator.

The major asset of the book is that it describes in detail the most common criticisms of nicotine dependence and their rationale. The major liability is that the book seems to me overly critical—for example, a study is often entirely dismissed if it has any flaw to it. Thus, by this method, a position can only be advocated when the perfect study is done. Unfortunately, the book becomes polemical enough to interfere with one's reading pleasure. Nevertheless, I would recommend reading this book as I think it important to force ourselves to listen to criticisms and think hard whether there is any truth to them.

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Editor's note: On receiving this review from Dr Hughes, I asked him to enquire from the authors of the book whether its production had been sponsored by the tobacco industry. They replied: "Several years ago we were approached by a law firm and consequently were paid for our time reading and evaluating some of the literature summarised in the book. Although the law firm refused to reveal its client's identity, it seems obvious that the client is from the tobacco industry. It is important to stress, however, that this law firm was strictly opposed to our publishing the book, and in fact warned that its publication might end our engagement as experts. We surmise that this reaction was for two reasons. First, the material in the book would pre-expose antagonists in law suits to arguments the law firm might use. Second, our critique might compel researchers to do a better job in attempting to establish the role of nicotine in smoking. We decided to publish our book for similar reasons. We believe that our engagement as experts has had no bearing on the conclusions we reach in our book." (reply truncated)—Hanan Frenk and Reuven Dar.