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Population strategies to prevent smoking

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ABC of smoking cessation
Population strategies to prevent smoking

Konrad Jamrozik

Interventions targeted at individual smokers are only part of the much broader spectrum of strategies to reduce the prevalence of smoking. This article summarises the population strategies that can make substantial contributions to smoking cessation and help to prevent people from taking up smoking. Ten important initiatives are used or have been proposed for reducing tobacco use at population level. Nine initiatives are discussed here; the tenth (the use of proved treatments) is covered in previous articles in this series.

Public places and workplaces

Policies that ban smoking in public places are effective in reducing passive smoking among non-smokers generally. They also protect vulnerable groups such as children and infants, adults with cardiac or respiratory disease, and pregnant women against the adverse effects of environmental tobacco smoke. Smoke-free policies in public places also send a clear message to young people about non-smoking being the norm, and they reduce the numbers of adults that young people see smoking.

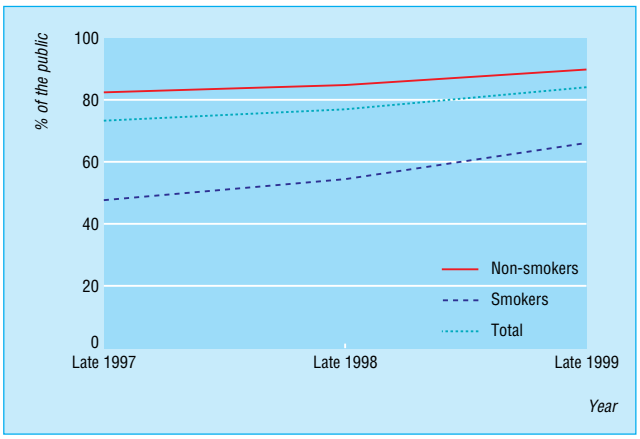
In the workplace, smoke-free policies lead to some staff quitting—typically about 4% of the workforce—and reduce daily consumption among continuing smokers. Each extension of a smoke-free policy to a setting in which smoking was previously permitted requires both careful consideration of public opinion and systematic planning for the change. It is good practice to offer existing smokers in an organisation help in quitting during the lead-up to the introduction of a smoke-free policy, but most of those who quit in response to the change do so without special help.

Support for smoke-free policies typically increases among smokers and non-smokers alike once the policies are introduced, and in the state of South Australia, for example, the introduction of smoke-free policies in restaurants and cafes indicates that such policies have no adverse economic impact.

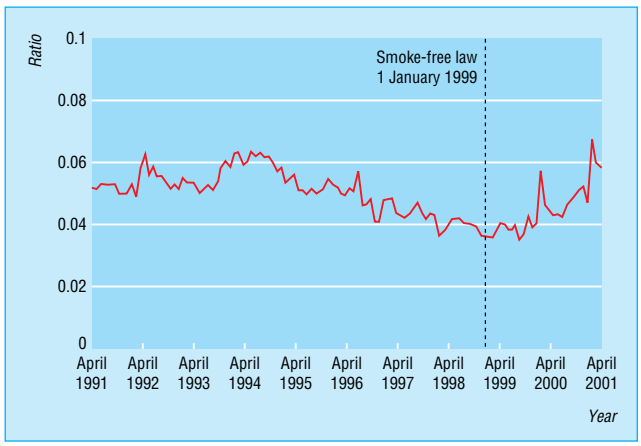
Ten point plan for tobacco control

Issue and initiative	Importance
Public places and workplaces: comprehensive smoke-free policies	Reduces passive smoking, increases cessation, lowers consumption, removes role models from children's view
Price: regular increases in the real (adjusted for inflation) price of tobacco products	Reduces consumption and prevalence; especially effective among adolescents
Public education: adequate funding for general and school education on tobacco	Sophisticated, intensive mass media campaigns increase quitting
Promotion: end to exemptions for sporting events and of "product placement"	Important in re-establishing non-smoking as the norm
Proved treatments: subsidies for cessation clinics and proven drug therapies	Counselling, nicotine replacement therapy, and bupropion at least double the success of attempts to quit; cost should not act as barrier to proved cessation aids
Prosecution: increase and publicise efforts to enforce legislation	Publicity has important "knock-on" effect—for example, in reducing sales to minors
Point of sale: tobacco products made an under the counter item	Closes further channel of promotion of tobacco products
Products and their production: remove the exemption for nicotine in tobacco from medicines, food, or other consumer protection legislation	Comprehensive and unified approach needed for regulation of nicotine (and other components in tobacco and tobacco smoke)
Packaging: move to generic packaging	Reduces appeal of tobacco products as symbols of lifestyle, sophistication, and wealth
Probity in public pronouncements: proscribe and penalise misleading public statements about tobacco and the tobacco industry	Reduces misleading information and confusion about tobacco

Good evidence exists that at least the first six of these initiatives are effective



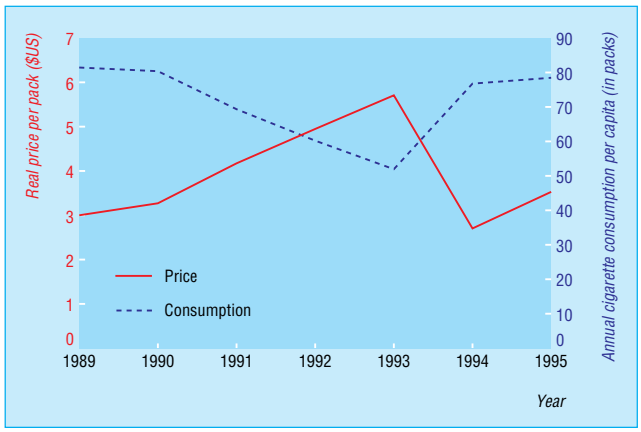
Support for smoke-free restaurants in South Australia (smoke-free policy introduced in January 1999). Adapted from Miller et al (*Aust N Z J Public Health* 2002;26:38-44)



Economics of smoke-free policies in restaurants: ratio of South Australia's restaurant sales to its retail sales, 1991 to 2001. Adapted from Wakefield et al (see Further Reading box)

Price

Price is one of the strongest influences on tobacco consumption. Typically, an increase in price of tobacco products of 10% causes a fall in smoking of 4% in adults and 6% in children, thus reducing prevalence while increasing revenue. Progressive and regular increases in the price of tobacco products through taxation, at least in line with the cost of living and preferably more, can therefore have a considerable impact on smoking prevalence. A price rise should be accompanied by clear publicity about the reasons for it—to reinforce the message that smoking is bad for the pocket as well as for health. A price rise also needs to be associated with appropriate investment to deter and detect smuggling of tobacco products into higher price areas.



Inverse relation between real price of cigarettes and consumption, Canada, 1989-95. Adapted from Jha et al (*Curbing the epidemic: governments and the economics of tobacco control.* Washington, DC: World Bank, 1999)

Public education

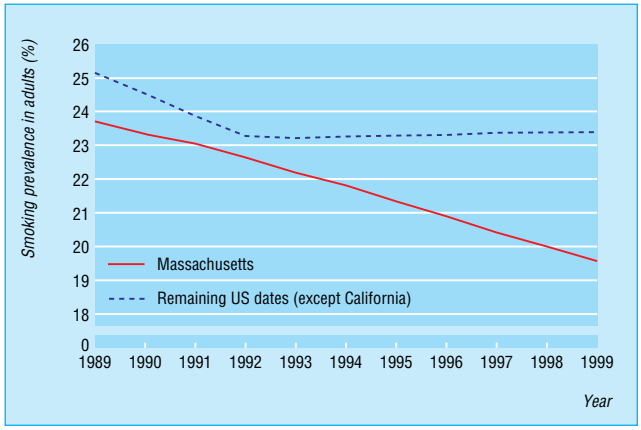
Mass media campaigns have a direct impact on the prevalence of smoking and are most effective when they are sustained and delivered as part of a comprehensive tobacco control programme. Most of the reduction is the result of established smokers quitting, but campaigns also reduce the proportion of children taking up smoking.

Mass media campaigns are expensive but not in relation to levels of tax revenue raised from tobacco products. Effective campaigns need careful coordination and a blend of medical and marketing expertise to ensure that their content is scientifically accurate and their presentation effective.

They also need to be bold and to take some risks, challenging public and personal opinions and feelings so that the issue of tobacco remains "alive" in the minds of individuals and communities. Such activities therefore need to have adequate funds not only for production and dissemination of materials but also for associated programmes of market research.

Strongly enforced non-smoking policies in schools seem to result in a lower prevalence of smoking in schoolchildren, though little evidence exists to date on the longer term effectiveness of this and other school based strategies in preventing smoking.

Evidence is mounting from communities with intensive, population-wide education strategies that the best way of reducing smoking in young people is to reset prevailing norms about smoking and to reduce greatly the prevalence of smoking in adults.



Effectiveness of sustained public education campaigns in reducing smoking in US state of Massachusetts. Adapted from Biener et al (*BMJ* 2000;321:351-4)

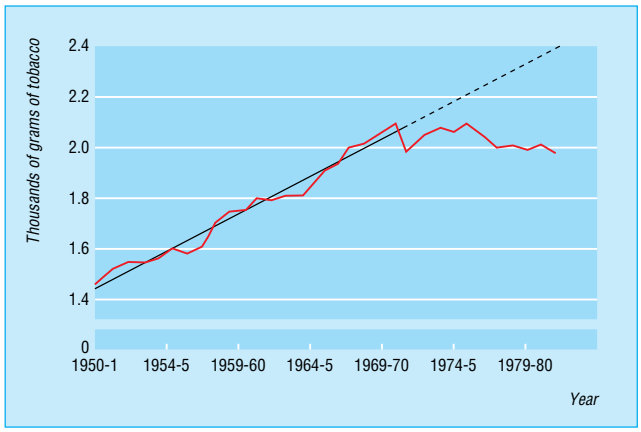
Educating children in schools about tobacco is an important component of a comprehensive tobacco control programme

Promotion

An increasing proportion of governments in Western countries have moved to ban all promotion of cigarettes and smoking via the electronic and print media; outdoor advertising such as billboards; competitions; or via direct "giveaways" to passers by. The Norwegian government was the first to commit itself to such a policy, and the announcement of this decision, in 1970, was followed by an immediate end to the upward trend in tobacco consumption in that country.

This shows the importance of a government giving a clear message to the public that it is serious about taking action on smoking. The passing of the legislation and its implementation are further landmark events that lend themselves to more publicity about changing norms in regard to smoking and the reasons for them.

Banning indirect tobacco advertising through sponsorship in sport and other public areas is as important as ending direct advertising. Other forms of tobacco promotion, such as product



Impact of political commitment to tobacco control—tobacco consumption in Norway before and after the 1975 tobacco act (first discussed 1970), which included a ban on cigarette advertising. Adapted from *Health or Smoking?* (Royal College of Physicians, 1983)

placement (deliberate or otherwise) in films and via the internet, also must be dealt with. This requires coordinated intergovernmental action because these activities transcend national boundaries.

Smoking in films helps to promote a positive image of smoking to young people

Point of sale

As the advertising of their products in the mass media and outdoor venues has come to an end in some countries, tobacco companies have increased the volume and sophistication of their promotional activities indoors in shops selling their products. Anecdotal reports speak of specially designed dispensing racks that obscure health warnings on cigarette packets, and some companies will refit entire display areas of shops in return for a guaranteed share of the space to show off their products. In Western Australia the introduction of a requirement that 50% of the area of promotional posters shown at the point of sale should contain a health warning was followed by a sharp reduction in the use of such posters. An unambiguous law that requires tobacco products to be stored out of sight under the counter (so that customers have to ask for them by name) is much better than governments having to make piecemeal regulatory responses to the industry's attempts to circumvent advertising restrictions.

Prosecution

- Regulatory measures to control tobacco need to be seen to be enforced
- Successful prosecutions of tobacco and advertising companies are an embarrassment to industries whose public images are critical to their business
- Prosecutions and large fines for small players in the industry—such as shopkeepers who repeatedly break the law on selling cigarettes to children or sellers of cut price smuggled tobacco—are also important in signalling that communities and their governments are serious about tobacco control
- Publicising such cases spreads and strengthens that perception and has been effective in persuading proprietors of tobacco outlets to take greater care in instructing their staff not to sell cigarettes to under-age customers

Regulation of tobacco products

Cigarettes are highly toxic, but in most countries they have generally remained exempt from the food, drug, or consumer protection legislation that applies to other consumer products. Smokeless tobacco products (see next article in this series) are much safer than cigarettes but are not permitted in many countries on health grounds. Medicinal nicotine is even safer, but is generally subject to drug legislation that prevents or inhibits use as an alternative regular nicotine supply. The result is that regulatory systems tend to favour the most dangerous products, and, if so, need to be reformed.

The Irish government has recently started to look at the issue of legislation surrounding medicinal nicotine as an alternative regular supply. It has established and is funding an Office for Tobacco Control with a remit to advise the government on tobacco related issues

Packaging

As one Australian tobacco company's annual report said, "Our products are their own best advertisement." This statement shows the importance to manufacturers of establishing and maintaining a physical image for each brand, preferably one that makes it symbolic of a desirable lifestyle, sophistication, and wealth. This has led to serious discussion of a move to generic packaging—with tobacco products all being presented in deliberately unappealing packets, with a substantial proportion

Further reading

- Fichtenberg CM,Glantz SA. Effect of smoke-free workplaces on smoking behaviour: systematic review. *BMJ* 2002;325:188-91.
- Wakefield M, Siahpush M, Scollo M, Lal A, Hyland A, McCaul K, et al. The effect of a smoke-free law on restaurant business in South Australia. *Aust N Z J Public Health* 2002;26:375-82.
- Glantz SA, Slade L, Bero LA, Hanauer P, Barnes DE. *The cigarette papers*. Berkeley: University of California Press, 1996.
- Royal College of Physicians. *Nicotine addiction in Britain: a report of the Tobacco Advisory Group of the Royal College of Physicians*. London: RCP, 2001.

of each packet displaying strong written and visual warnings about the hazards of smoking.

Probity in public pronouncements

The tobacco companies have an increasingly long record of being successfully prosecuted for misleading and deceptive behaviour under trade practices and consumer protection legislation. The Australian state of Tasmania has recognised that dealing with an entrenched pattern of such behaviour by case law and usually civil prosecution is an unsatisfactory way of curbing it. Instead, it has proscribed—and provided penalties for—issuing misleading public statements about either tobacco or the tobacco industry.

The film shot (from *Die Another Day*) is from the Kobal Collection.

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The ABC of smoking cessation is edited by John Britton, professor of epidemiology at the University of Nottingham in the division of epidemiology and public health at City Hospital, Nottingham.
The series will be published as a book in the late spring.

Key points

- Effective tobacco control programmes should tackle smoking at the population level
- Health staff working in smoking cessation should know about the main population strategies
- All tobacco advertising, sponsorship, and product placement should be banned
- Smoke-free policies should operate in all public places and workplaces
- Governments should introduce progressive price increases through tax
- Mass media public education programmes are an important strategy
- Effective policing of tobacco laws and smuggling is needed
- Appropriate cessation services should be available to all smokers wanting to quit
- Current inconsistent legislation on tobacco products and medicinal nicotine needs to be reformed

Competing interests: KJ received costs for travel and accommodation from SmithKlineBeecham to attend a meeting of the Australian Smoking Cessation Consortium that was convened by the drug company.
See first article in this series (24 January 2004) for the series editor's competing interests.

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Corrections and clarifications

Interactive case report: Treatment of nausea and vomiting during pregnancy
Two errors occurred in the first two articles in this three part series by Nicola Harker, Alan Montgomery, and Tom Fahey (31 January, p 276; 7 February p 337). In the first sentence of the first article ("presentation"), we wrongly said that the pregnant woman in the case report was primiparous, whereas in fact (as we revealed later in the text) she already had a 5 year old daughter. In the second article ("case progression") reference 5 was wrong; two references to the "measure yourself medical outcome profile" (MYMOP) should replace this:

5 Paterson C. Measuring outcomes in primary care: a patient generated measure, MYMOP, compared with the SF-36 health survey. *BMJ* 1996;312:1016-20.
6 Paterson C, Britten N. In pursuit of patient-centred outcomes: a qualitative evaluation of MYMOP, measure yourself medical outcome profile. *J Health Serv Res Policy* 2000;5:27-36.

Sustained clinical efficacy of sulfadoxine-pyrimethamine for uncomplicated falciparum malaria in Malawi after 10 years as first line treatment: five year prospective study
The authors have alerted us to a wrong date in the last paragraph of the full (bmj.com) version of this paper by Christopher V Plowe and colleagues (6 March, pp 545-8). Sulfadoxine-pyrimethamine was introduced in the KwaZulu-Natal region of South Africa in 1988 (not 1998, as stated).

What the educators are saying
An electronic glitch in the electronic processing of this Learning in Practice page by Val Wass and Paul O'Neill (24 January, p 210) resulted in a rogue reference appearing after the final item (Professionalism needs to be more clearly understood).

Simulation of medical emergencies improves patients' care
Readers of this summary in "This week in the BMJ" (31 January) relating to the paper "Clinical risk management in obstetrics: eclampsia drills" by Sarah Thompson and colleagues (pp 269-71) may have been misled by the word "evacuate," which inexplicably appeared in the second sentence. Thompson and colleagues reported on a fire drill programme, using on-site simulation, to identify deficiencies in the management of [not "to evacuate"] patients with eclampsia.

ABC of Eyes
In our zeal to conform to our own house style, which limits authors to only one job title and workplace address each, we wrongly fused the two affiliations of one of the authors of this series of articles from the *ABC of Eyes* (3 January, pp 36-8; 10 January, pp 97-9; 17 January, pp 156-8). Professor P T Khaw is professor and consultant ophthalmic surgeon at Moorfields Eye Hospital and the Institute of Ophthalmology, University College London (not professor of ophthalmology at Moorfields Eye Hospital, as we stated).

Diastolic heart failure
We failed to notice a missing level of evidence in the table accompanying this editorial by Ramachandran S Vasan (*BMJ* 2003;327:1181-2). The level of evidence for using imaging to determine the ejection fraction in order to diagnose systolic heart failure should have been shown as level I (evidence from several, large, well conducted randomised controlled trials).

Obituary of Derek Herbert Clarke
Injudicious editing of this obituary resulted in an error (28 February, p 526). Derek Clarke was married three times, so Audrey is his third wife (not second, as we stated).

Officials warn of looming humanitarian crisis in Sudan
In this world of continually changing national borders, it would be unwise to rely on an old atlas to draw up maps for publication. Yet this is what we inexplicably did for this news article by Peter Moszynski (21 February, p 424). In our map of northeast Africa we wrongly showed Ethiopia as having a border on the Red Sea; in fact, as Eritrea gained its independence from Ethiopia in 1993, this is no longer the case. The Zaire label was also wrong—that country has been known as the Democratic Republic of Congo since 1997. And still not content with our inaccuracies, we also managed to omit Saudi Arabia's final "a."