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#### [Intervention Review]

# Mass media interventions for smoking cessation in adults

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#### **ABSTRACT**

## **Background**

Mass media tobacco control campaigns can reach large numbers of people. Much of the literature is focused on the effects of tobacco control advertising on young people, but there are also a number of evaluations of campaigns targeting adult smokers, which show mixed results. Campaigns may be local, regional or national, and may be combined with other components of a comprehensive tobacco control policy.

### **Objectives**

To assess the effectiveness of mass media interventions in reducing smoking among adults.

#### **Search methods**

The Cochrane Tobacco Addiction Group search strategy was combined with additional searches for any studies that referred to tobacco/smoking cessation, mass media and adults. We also searched the Cochrane Central Register of Controlled Trials (CENTRAL) and a number of electronic databases. The last search was carried out in November 2016.

# **Selection criteria**

Controlled trials allocating communities, regions or states to intervention or control conditions; interrupted time series.

Adults, 25 years or older, who regularly smoke cigarettes. Studies which cover all adults as defined in studies were included.

Mass media are defined here as channels of communication such as television, radio, newspapers, billboards, posters, leaflets or booklets intended to reach large numbers of people, and which are not dependent on person-to-person contact. The purpose of the mass media campaign must be primarily to encourage smokers to quit. They could be carried out alone or in conjunction with tobacco control programmes.

The primary outcome was change in smoking behaviour. This could be reported as changes in prevalence, changes in cigarette consumption, quit rates, or odds of being a smoker.

# **Data collection and analysis**

Two authors independently assessed all studies for inclusion criteria and for study quality (MB, LS, RTM). One author (MB) extracted data, and a second author (LS) checked them.



Results were not pooled due to heterogeneity of the included studies and are presented narratively and in table form.

#### **Main results**

Eleven campaigns met the inclusion criteria for this review. Studies differed in design, settings, duration, content and intensity of intervention, length of follow-up, methods of evaluation and also in definitions and measures of smoking behaviour used. Among seven campaigns reporting smoking prevalence, significant decreases were observed in the California and Massachusetts statewide tobacco control campaigns compared with the rest of the USA. Some positive effects on prevalence in the whole population or in the subgroups were observed in three of the remaining seven studies. Three large-scale campaigns of the seven presenting results for tobacco consumption found statistically significant decreases. Among the eight studies presenting abstinence or quit rates, four showed some positive effect, although in one of them the effect was measured for quitting and cutting down combined. Among the three that did not show significant decreases, one demonstrated a significant intervention effect on smokers and ex-smokers combined.

#### **Authors' conclusions**

There is evidence that comprehensive tobacco control programmes which include mass media campaigns can be effective in changing smoking behaviour in adults, but the evidence comes from a heterogeneous group of studies of variable methodological quality. One state-wide tobacco control programme (Massachusetts) showed positive results up to eight years after the campaign. Another (California) showed positive results during the period of adequate funding and implementation and in final evaluation since the beginning of the programme. Six of nine studies carried out in communities or regions showed some positive effects on smoking behaviour and at least one significant change in smoking prevalence (Sydney). The intensity and duration of mass media campaigns may influence effectiveness, but length of follow-up and concurrent secular trends and events can make this difficult to quantify. No consistent relationship was observed between campaign effectiveness and age, education, ethnicity or gender.

#### PLAIN LANGUAGE SUMMARY

# Can tobacco control programmes that include a mass media campaign help to reduce levels of smoking among adults?

#### **Background**

Mass media programmes involve communication through television, radio, newspapers, billboards, posters, leaflets or booklets, with the aims of encouraging smokers to quit, and maintaining abstinence in non-smokers. It is difficult to establish their role in this process and they require strict methodological design.

#### **Review question**

To assess the effectiveness of mass media interventions in reducing smoking among adults.

# **Study characteristics**

We searched up until 30th November 2016, and found 11 relevant studies for this review. The numbers of participants varied between the included studies. All of the studies involved adults, although some studies also included younger people (14+ or 15+). Campaigns involved TV, radio, print media and billboard advertising. Studies differed in setting, duration, content of the intervention, length of observation, measures of smoking behaviour and the way of showing results. Two campaigns reported definite decreases in smoking prevalence, and some positive effects were observed in another three. Three large-scale campaigns reported lower tobacco consumption. Three studies showed some positive effect in abstinence or quit rates. One study did not show significant decreases but did demonstrate an effect of the intervention on smokers and ex-smokers combined.

#### **Key results**

Tobacco control programmes that include mass media campaigns may change smoking behaviour in adults, but the evidence comes from studies of variable quality and scale and often occur in an environment where there are other influences on smoking, making it hard to isolate the effects of the media campaign itself. No consistent patterns by age, education, ethnicity or gender were found.

# Quality of the evidence

There were problems with the design and conduct of all of the studies, which clouded the evidence. It would help if future studies could include comparator communities where there are no mass media interventions taking place to get a better estimate of the effect of the mass media campaign.