

# Increasing Tobacco Use Cessation: Mass Media Campaigns When Combined with Other Interventions (2000 Archived Review)

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## Review Summary

### Intervention Definition

Campaigns, as evaluated for this review, are mass media interventions that use brief, recurring messages to inform and motivate tobacco users to quit. Message content is developed through formative research, and the campaigns use paid airtime and print space (advertisements) and/or donated time and space (public service announcements). Campaigns can be combined with other interventions, such as an increase in excise tax, or additional community education efforts.

### Summary of Task Force Finding

The Community Preventive Services Task Force recommends mass media campaigns when combined with other interventions based on strong evidence of effectiveness in:

- Reducing population consumption of tobacco products
- Increasing cessation among tobacco product users

This recommendation is based primarily on the effectiveness of long duration, high-intensity campaigns implemented and evaluated in three states (California, Massachusetts, and Oregon) in which use of mass media was coordinated with an excise tax increase and funding for other community- and school-based education programs.

### Results from the Systematic Reviews

Fifteen studies qualified for the review of this intervention.

- Cessation rates in the intervention group over a median follow-up of 14 months (range: 6 months to 5 years): median of 7.0% (range: 3.9% to 50%; 5 studies)
- Difference in cessation rates between intervention group participants and comparison group participants: median of 2.2 percentage points (range: -2.0 to 25.0 percentage points; 5 studies)
- Per capita consumption of cigarettes in intervention states decreased by a median of 12.8% compared to the rest of the United States (15 fewer packs per capita per year; range -9.0 to -20.4 packs per year) (3 studies)
- Difference in tobacco use prevalence between intervention population and a comparison population: median reduction of 3.4 percentage points (+0.2 to -7.0 percentage points; 5 studies)
- Difference in tobacco use prevalence before and after the intervention (in studies without a concurrent control population): median of reduction of 3.6 percentage points (2 studies)
- All of the qualifying studies evaluated the effectiveness of a mass media campaign either coordinated with or concurrent with other interventions, including:
  - excise tax increases,
  - community education programs such as the distribution of self-help cessation information, or
  - individual/group counseling for cardiovascular disease risk factor reduction or for smoking cessation.

These findings were based on a systematic review of all available studies, conducted on behalf of the Task Force by a team of specialists in systematic review methods, and in research, practice and policy related to tobacco use and secondhand smoke exposure.

### Publications

Hopkins DP, Briss PA, Ricard CJ. [Reviews of evidence regarding interventions to reduce tobacco use and exposure to](#)

[environmental tobacco smoke](http://www.thecommunityguide.org/tobacco/tobac-AJPM-evrev.pdf) [www.thecommunityguide.org/tobacco/tobac-AJPM-evrev.pdf]. *Am J Prev Med* 2001;20(2S):16–66.

Task Force on Community Preventive Services. [Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke](http://www.thecommunityguide.org/tobacco/tobac-AJPM-recs.pdf) [www.thecommunityguide.org/tobacco/tobac-AJPM-recs.pdf]. *Am J Prev Med* 2001;20(2S):10–5.

Hopkins DP, Husten CG, Fielding JE. [Evidence reviews and recommendations on interventions to reduce tobacco use and exposure to environmental tobacco smoke: a summary of selected guidelines](http://www.thecommunityguide.org/tobacco/tobac-AJPM-recs-evrev-ets.pdf) [www.thecommunityguide.org/tobacco/tobac-AJPM-recs-evrev-ets.pdf]. *Am J Prev Med* 2001;20(2S):67–87.

Task Force on Community Preventive Services. [Tobacco](http://www.thecommunityguide.org/tobacco/Tobacco.pdf) [www.thecommunityguide.org/tobacco/Tobacco.pdf]. In: Zaza S, Briss PA, Harris KW, eds. *The Guide to Community Preventive Services: What Works to Promote Health?* Atlanta (GA): Oxford University Press;2005:3-79 (Out of Print).

## Task Force Finding

### Intervention Definition

Campaigns are mass media interventions of an extended duration, using brief, recurring messages to inform and to motivate children and adolescents to remain tobacco-free. Message content is developed through formative research, and message dissemination includes the use of paid broadcast time or print space (as advertisements), donated time and space (as public service announcements), or a combination of paid and donated time and space.

None of the studies identified in this review evaluated the impact of campaigns implemented alone. Therefore, the Task Force evaluated the evidence of effectiveness of mass media campaigns when implemented with additional interventions, such as tobacco product excise tax increases, school-based education, or other community programs. In most of the evaluated studies, however, the media campaign was the dominant intervention implemented.

### Task Force Finding (February 1999)\*

Mass media campaigns are strongly recommended by the Task Force based on strong evidence of effectiveness in reducing tobacco use prevalence among adolescents when implemented in combination with tobacco price increases, school-based education, and/or other community education programs.

\*From the following publication:

Task Force on Community Preventive Services. [Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke](http://www.thecommunityguide.org/tobacco/tobac-AJPM-recs.pdf) [www.thecommunityguide.org/tobacco/tobac-AJPM-recs.pdf]. *Am J Prev Med* 2001;20(2S):10–5.

## Supporting Materials

### Evidence Gaps

#### What are Evidence Gaps?

Each Community Preventive Services Task Force (Task Force) review identifies critical evidence gaps—areas where information is lacking. Evidence gaps can exist whether or not a recommendation is made. In cases when the Task Force finds insufficient evidence to determine whether an intervention strategy works, evidence gaps encourage researchers and program evaluators to conduct more effectiveness studies. When the Task Force recommends an intervention, evidence gaps highlight missing information that would help users determine if the intervention could meet their particular needs. For example, evidence may be needed to determine where the intervention will work, with which populations, how much it will cost to implement, whether it will provide adequate return on investment, or how users should structure or deliver the intervention to ensure effectiveness. Finally, evidence may be missing for outcomes different from those on which the Task Force recommendation is based.

#### Identified Evidence Gaps

##### *Effectiveness*

The effectiveness of increasing the unit price for tobacco products and mass media campaigns (when implemented with other interventions) is established. However, research issues regarding the effectiveness of these interventions remain.

- What intervention components contribute most to effectiveness of multicomponent interventions? What components contribute the least?
- What are the minimum and optimal requirements for the duration and intensity of mass media campaigns?
- What are the most effective combinations of messages for mass media campaigns?
- Do tobacco users respond differently to changes in product price that result from excise tax increases than to industry-induced increases?
- How long do the effects of a single excise tax increase last? Because the effectiveness of mass media cessation series and smoking cessation contests has not been established, basic research questions remain.

Because the effectiveness of mass media cessation series and smoking cessation contests has not been established, basic research questions remain.

- Are these interventions effective in increasing tobacco use cessation in the population?
- Do recruited tobacco users exposed to these interventions quit at a greater rate than recruited tobacco users not exposed to these interventions?
- What are the rates of participation in these interventions?

##### *Applicability*

The effectiveness of increasing the unit price and of mass media campaigns in reducing tobacco use in the population is established. However, identifying differences in the effectiveness of each intervention for specific subgroups of the population remains important.

- Do significant differences exist regarding the effectiveness of these interventions, based on the level of scale (i.e., national, state, local) at which they are delivered?
- What are the effects of mass media campaigns among populations that differ by race and ethnicity?

### *Other Positive or Negative Effects*

Several potential negative effects of tobacco product price increases were reviewed in this evaluation. Although further research on the potential negative effects is warranted, evaluating the effect of potential positive effects of reductions in tobacco use should also be investigated to provide a complete picture of the effects of increases in state and federal excise taxes.

- What are the effects of these interventions on reducing smoking-related fires? What are the effects on secondhand smoke exposure?
- What proportion of smokers substitute tobacco products, modify their smoking habits, or both in response to an increase in the price of tobacco products? How much of the potential health benefit of a price increase is reduced by these behaviors? How can these potential problems be reduced?
- Do mass media campaigns that focus on tobacco have additional effects on other drug use?

### *Economic Evaluations*

The available economic information on mass media campaigns was limited. Considerable research is, therefore, warranted regarding the following questions:

- What are the costs of mass media campaigns, especially campaigns that achieve an effective intensity over an extended duration?
- How do the costs per additional quitter compare with other interventions intended to reduce tobacco use?
- What is the cost-benefit, cost-utility, or cost per illness averted of these interventions?

### *Barriers*

Implementation of these interventions requires political action and support. Research issues generated in this review include the following:

- What components of successful legislative and referendum campaigns are most effective? What components are least effective?
- What information is most important in gaining public support for these interventions? In gaining legislative support?

What are the most effective ways to maintain adequate funding levels for mass media campaigns?

### *Included Studies*

Centers for Disease Control and Prevention. Cigarette smoking before and after an excise tax increase and an antismoking campaign--Massachusetts, 1990-1996. *MMWR - Morbidity & Mortality Weekly Report* 1996;45:966-70.

Centers for Disease Control and Prevention. Decline in cigarette consumption following implementation of a comprehensive tobacco prevention and education program--Oregon, 1996-1998. *MMWR - Morbidity & Mortality Weekly Report* 1999;48:140-3.

Cummings KM, Sciandra R, Davis S, Rimer BK. Results of an antismoking media campaign utilizing the Cancer Information Service. *Journal of the National Cancer Institute Monographs* 1993;113-8.

Fortmann SP, Taylor CB, Flora JA, Jatulis DE. Changes in adult cigarette smoking prevalence after 5 years of community health education: the Stanford Five-City Project. *American Journal of Epidemiology* 1993;137:82-96.

Jenkins CN, McPhee SJ, Le A, Pham GQ, Ha NT, Stewart S. The effectiveness of a media-led intervention to reduce smoking among Vietnamese-American men. *American Journal of Public Health* 1997;87:1031-4.

Ledwith F. Immediate and delayed effects of postal advice on stopping smoking. *Health Bulletin* 1984;42:332-44.

Luepker RV, Murray DM, Jacobs DJ, et al. Community education for cardiovascular disease prevention: risk factor changes in the Minnesota Heart Health Program. *American Journal of Public Health* 1994;84:1383-93.

Marin G, Perez-Stable EJ. Effectiveness of disseminating culturally appropriate smoking-cessation information: Programa Latino Para Dejar de Fumar. *Journal of the National Cancer Institute Monographs* 1995;155-63.

McAlister AL, Ramirez AG, Amezcua C, Pulley LV, et al. Smoking cessation in Texas-Mexico border communities: A quasi-experimental panel study. *American Journal of Health Promotion* 1992;6:274-9.

McPhee SJ, Jenkins CN, Wong C, et al. Smoking cessation intervention among Vietnamese Americans: a controlled trial. *Tobacco Control* 1997;4:s16-s24.

Meyer AJ. Skills training in a cardiovascular health education campaign. *Journal of Consulting & Clinical Psychology* 1980;48:129-42.

Mudde AN, De VH, Dolders MG. Evaluation of a Dutch community-based smoking cessation intervention. *Preventive Medicine* 1995;24:61-70.

Pierce JP, Gilpin E, Emery SL, White MM, Rosbrook B, Berry C. Has the California Tobacco Control Program Reduced Smoking? *JAMA* 1998;280:893-9.

Pierce JP, Macaskill P, Hill D. Long-term effectiveness of mass media led antismoking campaigns in Australia. *American Journal of Public Health* 1990;80:565-9.

Vartiainen E, Puska P, Jousilahti P, Korhonen HJ, Tuomilehto J, Nissinen A. Twenty-year trends in coronary risk factors in north Karelia and in other areas of Finland. *International Journal of Epidemiology* 1994;23:495-504.

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## Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

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