Effectiveness and cost-effectiveness of tobacco control mass media campaigns in England

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International evidence suggests campaigns:

- can promote quitting and reduce adult smoking
- small effect sizes but significant population-level effects
- negative health messages perform best
- Average of 400 GRPs per month needed to reduce adult smoking prevalence

Very little UK evidence:

- Freeze on public health campaigns April 2010
- Campaign re-introduced September 2011 reduced budget
MRC (NPRI) project

Aim: To evaluate the impact of English and Welsh anti-tobacco mass media campaigns carried out since 2004 on a comprehensive set of key indicators of adult smoking behaviours

Completed studies

- Characterisation of recent campaigns in England in terms of aims, informational and emotional content and style
- Effects of mass media campaigns on population-level indicators of smoking and quitting behaviour: calls to the NHS smoking helpline, use of SSS, consumption, and prevalence
- Impact of campaigns on smoking behaviour in the home
- Cost-effectiveness of tobacco control mass media campaigns
Jargon

Television ratings (TVRs):
The % of the potential audience that is estimated to have seen an advertisement

e.g. 100 TVRs = each person has viewed ad once, or 50% have viewed twice

E.g. 1200 TVRs = each person has viewed ad 12 times, 25% have seen ad 48 times.

Gross rating points (GRPs):
Sum of TVRs for individual adverts (but often used interchangeably)
Intensity

Total TVRs Jan 04-Mar 10: 24507

Emotional content

% of TVRs

Negative consequences of smoking | Benefits of quitting using particular methods
---|---
45.9 | 61.4
26.3 | 40.1


Jan 04-Mar 10 | Apr 08-Mar 10
Effect of freeze in campaigns

Immediate drops in
- Quitline calls – 65%
- Literature requests – 98%
- Web hits – 34%
No change in use of SSS (intensive support)
Sims et al. Addiction 2014

- Used monthly cross-sectional surveys (Opinion s & Lifestyle) to estimate effect of campaigns on prevalence
- Adjusted for other tobacco control policies, cigarette costliness and individual characteristics
- 400 point increase in GRPs was significantly associated with 3% lower odds of smoking two months later
- Campaigns accounted for 13.5% of decline in prevalence over the period 2002-2009
Our findings suggest that overall, national tobacco control MMC influence smoking behaviour.

But which type of tobacco control mass media campaign is most effective?
Effect on quitline calls by campaign type

Positive Campaigns

Negative Campaigns

Note: Plots generated using ggplot2 package
Effect on quit attempts

- Increased exposure to both positive and negative campaigns associated with increased quit attempts over 3 months

Effect on prevalence

- Increased exposure to both positive and negative campaigns associated with lower odds of smoking

- Positive campaigns OR per 400 GRPs 0.93 1 month later
- Negative campaigns OR per 400 GRPs 0.96 2 months later
Effect on smoke-free homes

- Overall ads had no effect on the proportion who reported having a smoke-free home (no one smokes inside most days)
- Ads with a smoke-free home focus increased odds of smoke-free home in the next month

\[ \text{Odds Ratio per 100 GRPs} = 1.07 \text{ (95\% CI 1.01-1.13)} \]
Are MMC cost-effective?

• MMC are expensive – are costs justified by benefits?
• Systematic review of economic evaluations
  – evidence on the cost-effectiveness of tobacco control mass media campaigns is limited (10 studies)
  – Methods are of acceptable quality, but studies highly heterogeneous
  – All suggest that TC MMC offer good value for money, compared with no campaign

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Conclusions

• This study has increased UK evidence base

• Evidence suggest TCC do influence quitting behaviour and reduce smoking

• Both positive and negative emotive campaigns are effective

• Campaigns are also cost effective
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