A cost-effectiveness analysis of online, radio and print tobacco control advertisements targeting 25-39 year-old males

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study aimed to evaluate the cost-effectiveness of non-televised advertisements in encouraging male smokers, aged 25 to 39 years, to respond to a smoking-cessation campaign. The authors concluded that online advertisements were potentially cost-effective, compared with other non-televised methods, for the specific target population. The outcomes were intermediate and the analysis of uncertainty was limited, but the conclusions on the cost-effectiveness of online campaigns seem appropriate.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study aimed to evaluate the cost-effectiveness of non-televised advertisements to encourage male smokers, aged 25 to 39 years, to respond to a smoking-cessation campaign.

Interventions
Four media campaigns were compared. Each campaign lasted one week. They were implemented in sequence, with one week in between. The first campaign was delivered by radio, online and in the press. This was followed by individual radio, online, and then press campaigns.

All advertisements presented two testimonials, and directed people to a quit telephone number (Quitline) and website, specifically created for the campaign. Those calling the Quitline could register for telephone counselling, while those visiting the website could register for the QuitCoach service; a web-based personalised cessation tool.

Location/setting
Australia/public health.

Methods
Analytical approach:
The economic evaluation was based on a seven-week observational study, conducted in Western Australia between 9th July and 26th August 2012, a period designed to avoid contamination by national quit smoking campaigns. The perspective was not stated.

Effectiveness data:
The primary effectiveness measures were the Quitline calls, telephone counselling registrations, total website visits, and QuitCoach registrations. These measures were assessed for a week before the seven-week intervention, to measure baseline visits without intervention. For the cost-effectiveness analysis, the measures were assessed independently and additionally. Total events were assessed with and without weighting for the probability of a call or website visit, leading to a service registration, for the whole seven weeks.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The primary effectiveness measures were the measures of benefit.

Cost data:
The costs included the production of the media, split evenly between the combined phase and each individual phase, and the placement of the advertisements. The number of placements was adjusted, based on the estimated proportion of the male smoking population who would be exposed to the advertisements. All costs were reported in Australian dollars (AUD).

Analysis of uncertainty:
One-way sensitivity analyses were undertaken by varying the weighting of outcomes, and using unique website visits instead of total visits, as an outcome.

Results
All effectiveness comparisons were made against the baseline unique visits in the week before the trial. The combined campaign generated 709 extra visits, calls, or registrations, without weighting. With weighting, there were 84 extra events. The radio campaign had no effect on website visits and QuitCoach registrations, but produced 24 calls or Quitline registrations (13 weighted events). The online campaign produced 1,102 extra visits, calls or registrations (most were online; 101 weighted events). The press campaign had no effect on website visits, but produced an additional 29 calls or registrations (12 weighted events).

The most expensive campaign was the combined campaign with a cost of AUD 131,296. This was followed by radio (AUD 57,458), press (AUD 54,751) and online (AUD 47,557) campaigns.

As the online campaign was most effective and cheapest, it dominated all the other advertising campaigns. This finding was robust in all the sensitivity analyses.

Authors' conclusions
The authors concluded that online quit-smoking advertisements were potentially cost-effective, compared with other non-televised methods, for the specific target population.

CRD commentary
Interventions:
The interventions were well described and appear to have been appropriately carried out to avoid the effects of national campaigns. The authors acknowledged that the exclusion of television advertisements meant that a full assessment of cost-effectiveness was not possible.

Effectiveness/benefits:
The outcome of interest was smoking cessation facilities. The authors acknowledged that their findings did not reflect the effectiveness of the cessation programmes. To derive a summary outcome, the authors used the World Health Organization's approach of combining different but related outcomes by summing their events. Unique visits were used in a sensitivity analysis, but the results were not presented; these results would still favour online media. No data for the week after the press phase were reported; these would have been useful to show the variation in the weekly outcomes in the absence of a media campaign.

Costs:
The perspective was not stated, but appears to have been that of the payer. The costs were generally well described. All the relevant costs of the interventions were included. The intermediate outcomes were not linked to health outcomes, so any savings relating to improved health were not evaluated. Such savings would increase the cost-effectiveness of the most effective treatment. The price year was not reported, which limits the comparison of the findings with those of other studies, and their generalisability.

Analysis and results:
The results were generally clearly reported, except those of the sensitivity analyses, which were not given. The analysis carried out was not fully incremental. The authors assumed that the effect of each media campaign dissipated in the week after it ended. There may have been other confounding factors during the study. Only one-way sensitivity analyses
were undertaken, and none of the results were reported. Given the small number of some events, it is likely that there was considerable uncertainty in the comparisons.

Concluding remarks:
The study was generally well reported and appears to have been reasonably conducted. The outcomes were intermediate and the analysis of uncertainty was limited, but the conclusions on the cost-effectiveness of online media, compared with other media, seem appropriate.

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