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These letters were shown to Dr Cruickshanks, who declined to reply.—ED.

## **Evaluating Antismoking Advertising Campaigns**

To the Editor.—Ms Goldman and Dr Glantz¹ conclude that antismoking messages concerning "industry manipulation and secondhand smoke are the most effective strategies for . . . reducing cigarette consumption." The evidence, however, does not warrant such a conclusion.

Without supporting citations, the authors classify the Massachusetts tobacco control campaign as "a more youth-oriented approach" than California's more confrontational advertisements. This conclusion appears to be based solely on the authors' own categorization of advertisements contained in focus group research reports.

Goldman and Glantz confound 2 different concepts in the analysis of media campaigns: target audience and content of message. Young people are a target audience, while issues of industry manipulation and secondhand smoke are particular themes. As shown in the Table, anti-tobacco industry and environmental tobacco smoke (ETS) themes constituted 32% of all youth-targeted messages and 37% of all messages in the Massachusetts tobacco control campaign. Goldman and Glantz compute that Massachusetts' overall antismoking media spending amounted to \$2.42 per capita. Had the authors relied on the rating-point data in the Table, they would have computed that Massachusetts' per capita spending on industry manipulation and secondhand smoke alone was \$0.90, an amount 80% greater than California's overall per capita spending of \$0.50.

Goldman and Glantz use data on total cigarette consumption per capita to assess the cost-effectiveness of the advertising campaigns in each state. Children consume only 2% to 3% of all cigarettes sold. The authors thus appear to be evaluating Massachusetts' "more youth-oriented approach" solely by examining adult cigarette use. From 1993 to 1996, cigarette smoking among Massachusetts students in grades 7 through 12 remained unchanged³ but increased in California⁴ and the rest of the United States.

The authors' analysis of consumption trends per capita does not appear to consider possible influences other than media spending and cigarette price. By 1996, California prohibited smoking in all public places except bars, 4 while only 50% of the Massachusetts population were covered by similar local laws. 5 This omission is important in view of the authors' conclusion that media messages emphasizing the dangers of ETS are effective

Comparing the experience of 7 years in California (1989-1996) with 3 years in Massachusetts (1993-1996), the authors conclude that California's per capita consumption declined more rapidly than that of Massachusetts. However, in an analysis of both states during 1990 to 1996,<sup>6</sup> we reported a larger decline in Massachusetts.

Goldman and Glantz offer no quantitative analyses of focus group reports that they reviewed. No sample sizes or statistical tests are reported. The methodological basis for the effectiveness scale reported in their summary table (ie, "highly effective," "moderately effective," "effective," and "not effective") is neither documented nor validated.

We urge legislators and public health officials who make policy decisions about antismoking campaigns to rely on Distribution of Gross Rating Points by Target Audience and Content of Message From the Massachusetts Tobacco Control Campaign, July 1994-June 1996

Content of Message				
Target Audience	Anti-Tobacco Industry, GRPs	ETS, GRPs	All Themes, GRPs	Proportion Anti-Tobacco Industry and ETS, %
Youth	2592		8226	32
Adult smoker	544	750	4810	27
Public opinion	2553	375	5249	56
All targets	5689	1125	18 285	37

\*Data are from Arnold Communications.<sup>2</sup> GRP indicates gross rating point; ETS, environmental tobacco smoke. Ellipses indicate data not applicable.

sounder, more scientific evidence than that presented by the authors.

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In Reply.—Drs Connolly and Harris¹ criticize us for describing the Massachusetts antitobacco media campaign as "a more youth-oriented approach" than the one California used. Yet, they use the fact that the Massachusetts campaign was more youth oriented to explain why we saw faster declines in per capita consumption of cigarettes in California than in Massachusetts. They are correct in stating that youth consume only 2% to 3% of cigarettes, which is another reason that a youth-focused program is a mistake. It is, after all, the adults whom tobacco kills. Moreover, while it is preferable to prevent tobacco use altogether, to stop smoking in young adulthood avoids the long-term health consequences.<sup>2,3</sup>

Connolly and Harris are incorrect when they state that we confuse target audience and message. The table in our article clearly distinguishes between effectiveness of messages for youth and adults. The fact is that anti-tobacco industry and secondhand smoke messages are the best ones for both youths and adults, albeit for different reasons.

We agree that the efforts in California to create smoke-free workplaces contributed to the greater cost-effectiveness of the California program compared with Massachusetts. The California media campaign was explicitly designed to support this effort. The fact that the anti-tobacco industry and secondhand smoke advertisements were targeted at adults as well as youth contributed to this success. (As we noted in our article, one obtains similar measures of the relative effectiveness of the 2 states' programs when the calculations are based on total expenditures.) While we concluded that the more aggressive California campaign was more cost-effective at reducing cigarette consumption than the Massachusetts campaign, we did not conclude that the Massachusetts campaign was ineffective. Smoking declined in Massachusetts faster than in the rest of the United States, but not as fast as in California per dollar spent per capita.