



PUBLIC EDUCATION CAMPAIGNS REDUCE TOBACCO USE

The tobacco industry spends over \$12.8 billion a year marketing and advertising its products.¹ A study published in the *Journal of the National Cancer Institute* found that this tobacco marketing has a greater influence in spurring kids to take up smoking than exposure to parents or peers who smoke.² Other studies have shown the vast majority of young smokers prefer one of the three most heavily advertised brands of cigarettes,³ which results from a deliberate strategy on the part of tobacco companies to attract the youth market.⁴ A 1998 article in the *Journal of the American Medical Association* estimated that tobacco advertising and promotion accounted for one-third of all experimentation with tobacco by California teens between 1993 and 1996.⁵

The aggressive targeting of our youth by the tobacco industry demands an equally aggressive public education campaign to prevent smoking initiation among youth (when most smokers start), to encourage smokers to quit, and to change the social context of tobacco use so that pro-tobacco messages are no longer dominant. A well-designed public education campaign that is integrated with community and school-based programs, strong enforcement efforts, and help for smokers who want to quit, can successfully counter tobacco industry marketing. Such integrated programs have been demonstrated to lower smoking among young people by as much as 40 percent.⁶ A 2010 study in *The Lancet* found that mass media anti-tobacco campaigns are associated with a decline in youth starting to smoke and an increase in the number of adult smokers who quit. The study also concluded that mass media campaigns are more likely to be successful if they are combined with multiple interventions such as community-based programs and services.⁷

An effective public education campaign must use multiple channels to reach the target audience with messages that are based on research regarding what is most effective. It should consist of a variety of paid media efforts (television, radio, print, outdoor, etc.) but must also include public relations efforts that result in “earned” media to reach the audience effectively. Non-traditional venues such as the Internet, street marketing, and other special events should also be part of the mix.

Several states have undertaken public education campaigns as part of comprehensive tobacco reduction programs. When implemented with adequate funding, these programs have reduced smoking and other tobacco use, and the public education campaigns have been instrumental in these reductions.

Expert Conclusions on Public Education Campaigns

There is a large and growing body of evidence on what works to reduce tobacco use. This evidence and the resulting recommendations for state tobacco prevention and cessation programs are best summarized in the U.S. Centers for Disease Control and Prevention’s (CDC), *Best Practices for Comprehensive Tobacco Control Programs*. The CDC’s *Best Practices* publication concludes that public education (counter-marketing) campaigns are an integral part of efforts to both prevent initiation of tobacco use and to encourage tobacco cessation.⁸

In addition, the Task Force on Community Preventive Services, an independent expert advisory committee created by CDC, studied the impact of mass media campaigns and other tobacco prevention and cessation methods on prevention of tobacco use and tobacco cessation. The Task Force found “strong evidence” that mass media campaigns, combined with other interventions, are effective in reducing tobacco use initiation, in reducing consumption of tobacco products, and in increasing cessation among tobacco users.⁹

A comprehensive report released in June 2008 by the National Cancer Institute (NCI), *The Role of the Media in Promoting and Reducing Tobacco Use*, concluded that anti-tobacco media campaigns are effective in reducing smoking among youth and adults. Particularly, advertisements that evoke strong emotions have the most impact on viewers, and youth even react positively to anti-tobacco advertisements aimed at adults.¹⁰

The 2000 Surgeon General's report, *Reducing Tobacco Use*, suggests that counter-marketing efforts that include pro-health messages and messages about the tobacco industry's marketing and promotional tactics are required to counter the tobacco industry's efforts to promote misleading messages and images about tobacco to young people and adults. Further, the report concludes that the evidence indicates that mass media campaigns are effective at informing the public, including youth, about the hazards of smoking and at promoting specific cessation actions and services.¹¹

In January 2003, the Cessation Subcommittee to the U.S. Department of Health and Human Service's Interagency Committee on Smoking and Health delivered its recommendations on smoking cessation at a public hearing. This panel of experts, comprised of the nation's experts on smoking cessation, stated that paid media campaigns, particularly ones that are fully integrated into a broader spectrum of tobacco control activities, are a highly effective means of reducing prevalence and increasing quit attempts by smokers.

Evidence That Public Education Works

Evidence suggests that the public education component is a critical piece driving the success of comprehensive tobacco prevention programs. A 2005 study published in the *Archives of Pediatric and Adolescent Medicine* provides powerful evidence that state-sponsored anti-tobacco media campaigns are working to change youth attitudes about tobacco and to reduce youth smoking. The study found strong associations between exposure to state-sponsored TV anti-tobacco advertisements and general recall of anti-tobacco advertising, anti-smoking attitudes and beliefs, and smoking prevalence. Specifically, only 19 percent of students with greater exposure to state-sponsored anti-tobacco advertisements reported smoking in the past 30 days, compared to 27 percent of students in markets with no exposure to state-sponsored anti-tobacco ads. Additionally, students that had greater exposure to state-sponsored anti-tobacco ads were significantly less likely to report most or all of their friends were smokers, were less likely to say they would never get addicted to cigarettes, were more likely to perceive the harms of smoking one or more packs a day, and were more likely to report that they definitely would not be smoking in five years, compared to students with less exposure to the ads.¹²

A study published in the June 2006 issue of *Health Education Research* found that increased exposure to state sponsored anti-tobacco media campaigns increases smoking cessation rates, even after controlling for other factors that may affect smoking cessation. Specifically, researchers found that the quit rate among adult smokers increased by about ten percent in communities exposed to higher levels of state anti-tobacco advertising (about two additional exposures per person per month).¹³

The only national counter-marketing campaign is the American Legacy Foundation's hard-hitting media campaign, truth@. The truth@ campaign, which is targeted at youth and includes television and radio advertising, grassroots efforts, and an interactive web site, has also been associated with large declines in smoking prevalence among high school students.¹⁴ A study published in the March 2005 issue of the *American Journal of Public Health* found that 22 percent of the decline in youth smoking prevalence between 1999 and 2002 is attributable to the truth@ campaign. Furthermore, the study found that in 2002, there were approximately 300,000 fewer youth smokers as a result of truth@.¹⁵ More recent research confirms earlier findings regarding the effectiveness as well as the cost-effectiveness of the truth@ campaign. A 2009 study in *Health Education Research* found that exposure to the truth@ campaign was associated with higher levels of antitobacco attitudes and beliefs and these antitobacco sentiments increased during the first three years of the campaign. In addition, recall of the truth@ ads was associated with greater intentions not to smoke.¹⁶ A study published online in 2009 in the *American Journal of Preventive Medicine* found that for every single dollar spent on the campaign, 6 dollars in future medical costs were averted.¹⁷

The empirical evidence regarding the effectiveness of public education campaigns is vast and growing. A few of the more relevant studies are summarized below.

- Florida experienced dramatic declines in its youth smoking rates following implementation of an aggressive, youth-oriented, counter-marketing media campaign. A study published in the May 2010 edition of *Preventing Chronic Disease* found that youth smoking prevalence declined by 31.3 percent from baseline to the time the campaign was terminated in 2001. Unfortunately, within five years after funding for the campaign was eliminated, smoking rate declines started to reverse. In fact, smoking rates increased by 6.8 percent for all youth and by 11.9 percent for youth aged 15 years or younger.¹⁸

- A recent evaluation of California's Tobacco Education and Media Campaign concluded that the campaign contributed to significant reductions in smoking prevalence among both youth and adults. Researchers also found that the campaign encourages adult smokers to quit and deters smoking initiation among youth.¹⁹ An earlier study found that California's anti-tobacco media campaign reduced cigarette consumption. In its early years, the California tobacco control program produced a 10-percent to 13-percent decline in cigarette consumption, with about a fifth of the decline caused by the media campaign, alone.²⁰
- A study in the *American Journal of Public Health* found that the California anti-tobacco media campaign reduced sales of cigarettes by 232 million packs between the third quarter of 1990 and the fourth quarter of 1992.²¹
- A 2002 report of the Florida Youth Tobacco Survey showed that between 1998 and 2002 current cigarette use among middle school students declined by 50 percent, and current cigarette use among high school students declined by 35 percent. These declines followed implementation of the Florida Pilot Program on Tobacco Control, which included an aggressive counter-marketing media campaign.²²
- A 2001 study in the *American Journal of Public Health* on smoking initiation rates following exposure to the truth® media campaign in Florida showed that youths who were able to confirm awareness of the truth® advertisements were less likely to initiate smoking than youths who could not confirm awareness of the television advertisements.²³
- A 2000 study published in the *American Journal of Public Health* showed that youth in Massachusetts aged 12 to 13 who reported exposure to antismoking television advertisements at baseline were significantly less likely to have progressed to establish smoking at follow-up than youth who did not report exposure to antismoking television advertisements.²⁴
- A 15-year follow-up study in the *American Journal of Public Health* showed that the reductions in tobacco use produced by a mass media intervention combined with a school and community-based education program last over time. Mean lifetime cigarette consumption was 22 percent lower among program subjects than among control subjects.²⁵
- A 2009 study published in the *American Journal of Public Health* found that smokers who had greater exposure to anti-smoking ads were more likely to have quit smoking at 24 months follow-up. On average, smokers were exposed to more than 200 anti-smoking ads during a two-year period and the odds of having quit at follow-up increased by 11 percent with each ten additional ad exposures. The effect was greater among lower and middle socioeconomic populations than among smokers in higher socioeconomic groups.²⁶
- The Massachusetts tobacco control campaign, which has a sizeable public education component has been effective in increasing public perception of the harms of cigarette smoking,²⁷ and is associated with a substantial decline in cigarette consumption.²⁸ A 1997 independent evaluation of the Massachusetts campaign found that tobacco consumption dropped from 1992 to the first half of 1997 by 31 percent, more than triple the rate of decline observed for the rest of the nation.²⁹
- A 1995 study of California's anti-smoking program in the *American Journal of Public Health* found that anti-smoking media campaigns are an effective way of reducing cigarette consumption, and noted that higher funding levels produced more powerful results.³⁰
- Cigarette smoking among adults in Arizona dropped by 21 percent, from 23.1 to 18.3 percent, between 1996 and 1999, after a statewide media campaign was implemented as part of a comprehensive tobacco prevention program, with funds generated from a voter approved cigarette excise tax increase.³¹
- A 1994 study in the *American Journal of Public Health* determined that anti-smoking advertising decreased smoking beyond the effects of school-based interventions. Students who were exposed to media plus school interventions were found to be at lower risk for smoking than those only receiving school interventions.³²
- A 1992 study published in the *American Journal of Public Health* found that a five year intervention involving a media campaign, community programs, and school-based instruction resulted in significantly lower smoking rates. At the end of high school, just 14.6 percent of students in the intervention community were weekly smokers, compared to 24.1 percent of those in the control community.³³
- Research has shown that the FCC-required antismoking messages during the late 1960s resulted in a decline in per capita cigarette consumption of at least five percent,³⁴ and a reduction in the prevalence of teenage smoking of three percentage points.¹⁵ During the three years the program ran,

antismoking ads were found to be nearly six times more effective than cigarette advertising at influencing smoking behavior.²⁵ Anti-smoking ads were so effective that tobacco companies agreed to take their own ads off television in order to have these ads removed.

- A 1997 study published in *Tobacco Control* found that, in terms of cost per years of life gained, mass media and education campaigns are among the most cost-effective methods to prevent or reduce tobacco use currently available.³⁵

Just as the evidence is clear that counter-marketing campaigns reduce youth smoking, it is also apparent that when these campaigns lose funding, their impact is almost immediately affected. Just six months after funding for the Target Market counter-marketing campaign in Minnesota was eliminated, awareness of the campaign among 12-17 year olds had already declined from 84.5 percent to 56.5 percent and youth susceptibility to smoking increased by 22 percent.³⁶

Weak Campaigns Do Not Work

The evidence clearly indicates that public education strategies that are hard-hitting, directly based on youth input, and address themes such as health consequences and tobacco company targeting of young people, resonate with youth and are associated with dramatic declines in youth smoking prevalence. Anti-tobacco ads that dramatically portray the serious negative consequences of smoking and that highlight tobacco industry tactics and motives prevent smoking initiation among youth, lead to cessation, and are rated the highest among teens in terms of making them think about not using tobacco and raising their awareness of tobacco counter-marketing messages. Conversely, several studies have shown that tobacco industry's so-called youth prevention media campaigns do not work.

- In its comprehensive 2008 report on tobacco use and the media, the NCI confirmed that tobacco industry-sponsored youth smoking prevention programs are “generally ineffective” at reducing youth smoking and may have caused some youth to start smoking.³⁷
- A study published in the *American Journal of Public Health* in 2006 found that the industry's “prevention” ads targeted at youth are ineffective and do not change smoking outcomes, while industry ads targeted at parents increase the likelihood that kids will smoke. Among 10th and 12th graders, higher exposure to the parent-targeted ads was associated with lower perceived harm of smoking, stronger approval of smoking, stronger intentions to smoke in the future, and a greater likelihood of having smoked in the past 30 days.³⁸
- A systematic review of mass media campaigns on youth smoking published in 2008, found that tobacco industry-funded youth prevention campaigns have minimal impact on youth smoking because they avoid the most powerful anti-tobacco themes of health effects and industry manipulation. The review found that these campaigns may actually undermine tobacco control efforts because they improve the tobacco industry's public image.³⁹
- Industry youth prevention media campaigns which position smoking as an adult habit or as a “choice” and ignore the consequences of smoking, are not effective, and in fact may undermine the effects of aggressive media campaigns.⁴⁰ Industry ads that use a “choice” theme and focus on refusal messages appear to have no effect on preventing smoking initiation, do not resonate with teens, and do not appear to offer any compelling reason not to smoke.⁴¹
- Researchers have warned that portraying smoking as taboo or forbidden and as an adult behavior is counterproductive because it increases its attraction to youth by offering a means of rebellion and by allowing youth to become instant adults.⁴²

Necessary Characteristics of any Effective Public Education Strategy

Available research and experience shows that a public education campaign should include the following characteristics to be most successful.

- It must incorporate paid media, public relations, and special events and promotions in a coordinated effort that is integrated with school and community-based programs, as well as the other elements of a comprehensive tobacco reduction plan.⁴³
- It must be well-funded so the media component can achieve the reach necessary to be effective. This effort must be sustained over the long term.⁴⁴

- There should be no restrictions on the content of the messages, and the campaign must operate completely independent of tobacco industry input.
- It must be grounded in rigorous and state-of-the-art research on effectiveness.
- It must contain a method for reliable evaluation and modification.

Campaign for Tobacco-Free Kids, February 18, 2011 / Meg Riordan

More information on the effectiveness of tobacco prevention programs is available at http://www.tobaccofreekids.org/facts_issues/fact_sheets/policies/prevention_us_state/save_lives_money/.

¹ U.S. Federal Trade Commission (FTC), *Cigarette Report for 2006, 2009*, <http://ftc.gov/os/2009/08/090812cigarettereport.pdf>. See also, FTC, *Smokeless Tobacco Report for the Year 2006, 2009*, <http://ftc.gov/os/2009/08/090812smokelesstobaccoreport.pdf>. Data for top 5 manufacturers only. FTC, *Cigarette Report for 2004 and 2005, 2007*, <http://www.ftc.gov/reports/tobacco/2007cigarette2004-2005.pdf>. FTC, *Smokeless Tobacco Report for the Years 2002 - 2005, 2007*, <http://www.ftc.gov/reports/tobacco/02-05smokeless0623105.pdf> [data for top 5 manufacturers only].

² Evans N, et al., "Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking," *Journal of the National Cancer Institute* 87(20):1538-1545, October 18, 1995.

³ Substance Abuse and Mental Health Services Administration (SAMHSA), *Results from the 2005 National Survey on Drug Use and Health (NSDUH): Detailed Tables, 2006*, <http://www.oas.samhsa.gov/nsduh/2k5nsduh/tabs/Sect7peTabs58to67.pdf>.

⁴ RJR Industry documents released January 15, 1998, as reported in *Washington Post, New York Times, Wall Street Journal*.

⁵ Pierce, JP, et al., "Tobacco Industry Promotion of Cigarettes and Adolescent Smoking," *Journal of the American Medical Association (JAMA)* 279(7):511-515, February 18, 1998.

⁶ Flynn, BS, et al., "Mass media and school interventions for cigarette smoking prevention: Effects 2 years after completion," *American Journal of Public Health (AJPH)* 84:1148-50, 1994.

⁷ Wakefield, M et al., "Use of Mass Media Campaigns to Change Health Behaviour," *The Lancet* 376(9748):1261-71, October 9, 2010.

⁸ U.S. Centers for Disease Control and Prevention (CDC), *Best Practices for Comprehensive Tobacco Control Programs – 2007*. Atlanta, GA: U.S. Department of Health and Human Services, October 2007, http://www.cdc.gov/tobacco/tobacco_control_programs/stateandcommunity/best_practices/index.htm.

⁹ The Guide to Community-Preventive Services, "The Effectiveness of Mass Media Campaigns to Reduce Initiation of Tobacco Use and to Increase Cessation," January 3, 2003, <http://www.thecommunityguide.org/tobacco/tobac-int-mass-media.pdf>.

¹⁰ National Cancer Institute, *The Role of the Media in Promoting and Reducing Tobacco Use*, Smoking and Tobacco Control Monograph No. 19, NIH Pub. No. 07-6242, June 2008, http://cancercontrol.cancer.gov/tcrb/monographs/19/m19_complete.pdf. See also, Biener, L, et al., "How Broadcast Volume and Emotional Content Affect Youth Recall of Anti-Tobacco Advertising," *American Journal of Preventive Medicine* 35(1):14-19, July 2008.

¹¹ U.S. Department of Health and Human Services (HHS), *Reducing Tobacco Use: A Report of the Surgeon General, 2000*, http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2000/index.htm.

¹² Emery, S, et al., "Televised state-sponsored anti-tobacco advertising and youth smoking beliefs and behavior in the United States, 1999-2000," *Archives of Pediatric and Adolescent Medicine* 159(7):639-45, July 2005.

¹³ Hyland, A, et al., "Anti-tobacco Television Advertising and Indicators of Smoking Cessation in Adults: A Cohort Study," *Health Education Research* 21(3):348-54, June 1, 2006.

¹⁴ American Legacy Foundation, "Getting to the Truth: Assessing Youths' Reactions to the truthSM and 'Think. Don't Smoke' Tobacco Countermarketing Campaigns," First Look Report 9, June 2002. http://www.americanlegacy.org/PDFPublications/fl_9.pdf.

¹⁵ Farrelly, MC, et al., "Evidence of a Dose-Response Relationship Between 'truth' Antismoking Ads and Youth Smoking Prevalence," *AJPH* 95:425-431, 2005.

¹⁶ Farrelly, MC, et al., "Sustaining 'truth': changes in youth tobacco attitudes and smoking intentions after 3 years of a national antismoking campaign," *Health Education Research* 24(1):42-48, 2009.

¹⁷ Hotlgrave, DE, et al. "Cost-Utility Analysis of the National truthSM Campaign to Prevent Youth Smoking," *American Journal of Preventive Medicine*, 36(5), 2009.

¹⁸ Dietz, N, et al., "Changes in Youth Cigarette Use Following the Dismantling of an Antitobacco Media Campaign in Florida," *Public Health Research, Practice, and Policy* 7(3):1-4, May 2010.

¹⁹ Liu, H & Tan, W, "The Effect of Anti-Smoking Media Campaign on Smoking Behavior: The California Experience," *Annals of Economics and Finance* 10-1, 29-47, 2009.

²⁰ Hu T, Sung HY, & Keeler TE, "Reducing cigarette consumption in California: Tobacco Taxes vs an Anti-Smoking Media Campaign," *AJPH* 85:1218-22, 1995.

²¹ Hu, T, et al., "The Impact of California anti-smoking legislation on cigarette sales, consumption, and prices," *Tobacco Control* 4(Suppl 1):S34-8, 1995.

- ²² Florida Department of Health, *2002 Florida Youth Tobacco Survey*, Volume 5, Report 1; May 2003. Sly, DF, et al., "The Florida 'truth' anti-tobacco media evaluation: design, first-year results, and implications for planning future state media evaluations," *Tobacco Control* 10:9-15, 2001.
- ²³ Sly, DF, et al., "Influence of a Counteradvertising Media Campaign on Initiation of Smoking: The Florida 'truth' Campaign," *AJPH* 91(2):233-238, 2001.
- ²⁴ Seigel, M & Beiner, L, "The Impact of an Antismoking Media Campaign on Progression to Established Smoking: Results of a Longitudinal Youth Study," *AJPH* 90(3):380-386, March 2000.
- ²⁵ Vertiainen, E, et al., "Fifteen-Year Follow-Up of Smoking Prevention Effects in the North Karelia Youth Project," *AJPH* 88(1):81-85, 1998.
- ²⁶ Durkin, SJ, et al., "Effects of Different Types of Antismoking Ads on Reducing Disparities in Smoking Cessation Among Socioeconomic Subgroups," *AJPH* Published Online, October 2009.
- ²⁷ *An Assessment of the Massachusetts Tobacco Control Program Youth Prevention Campaign*, Boston: Houston Herstek Favat, 1997.
- ²⁸ Goldman, LK & Glantz, SA, "Evaluation of antismoking advertising campaigns," *JAMA* 279(10):772-7, 1998. CDC, "Cigarette smoking before and after an excise tax increase and an antismoking campaign – Massachusetts, 1990-1996," *Morbidity and Mortality Weekly Report (MMWR)* 45(44):966-70, 1996, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00044337.htm>.
- ²⁹ Abt Associates, Inc., *An Independent Evaluation of the Massachusetts Tobacco Control Program; Fourth Annual Report: Summary*, January 1994 to June 1997.
- ³⁰ Hu T, Sung HY, & Keeler TE, "Reducing cigarette consumption in California: Tobacco Taxes vs an Anti-Smoking Media Campaign," *AJPH* 85:1218-22, 1995.
- ³¹ CDC, "Tobacco Use Among Adults – Arizona, 1996 and 1999," *MMWR* 50(20):402-406, 2001, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5020a2.htm>.
- ³² Flynn, BS, et al., "Mass media and school interventions for cigarette smoking prevention: effects 2 years after completion," *AJPH* 84:1148-50, 1994.
- ³³ Perry CL, et al., "Communitywide Smoking Prevention: Long-Term Outcomes of the Minnesota Heart Health Program and the Class of 1989 Study," *AJPH* 82(9):1210-1216, 1992.
- ³⁴ HHS, *Reducing the Health Consequences of Smoking: 25 Years of Progress, A Report of the Surgeon General*, 1989, <http://profiles.nlm.nih.gov/NN/B/B/X/S/>. Warner, KE, "The effects of the anti-smoking campaign on cigarette consumption," *AJPH* 67:645-50, 1977. Hamilton, JL, "The demand for cigarettes: advertising, the health scare, and the cigarette advertising ban," *Review of Economics and Statistics* 54:401-11, 1972. Schneider, L, Klein, B, & Murphy, KM, "Governmental regulation of cigarette health information," *Journal of Law and Economics* 24:575-612, 1981. Lewit, EM, Coate, D, & Grossman, M, "Governmental regulation of cigarette health information," *Journal of Law and Economics* 24:545-69, 1981.
- ³⁵ Secker-Walker, RH, et al., "A mass media programme to prevent smoking among adolescents: costs and cost effectiveness," *Tobacco Control* 6:207-212, 1997.
- ³⁶ CDC, "Effect of Ending an Antitobacco Youth Campaign on Adolescent Susceptibility to Cigarette Smoking – Minnesota, 2002-2003," *MMWR* 53(14):301-304, 2004, <http://www.cdc.gov/mmwr/PDF/wk/mm5314.pdf>.
- ³⁷ National Cancer Institute, *The Role of the Media in Promoting and Reducing Tobacco Use*, Smoking and Tobacco Control Monograph No. 19, NIH Pub. No. 07-6242, June 2008.
- ³⁸ Wakefield, M, et al., "Effect of Televised, Tobacco Company-Funded Smoking Prevention Advertising on Youth Smoking-Related Beliefs, Intentions, and Behavior," *AJPH* 96(12):2154-2164, December 2006.
- ³⁹ Angus, K, et al., *The Effect of Tobacco Control Mass Media Campaigns, Counter-Advertising, and Other Related Community Interventions on Youth Tobacco Use*, University of Stirling, Institute for Social Marketing, January 2008. See also, Wakefield M, et al., "Youth Responses to Anti-Smoking Advertisements from Tobacco-Control Agencies, Tobacco Companies, and Pharmaceutical Companies," *Journal of Applied Social Psychology*, 35(9):1894-1911, 2005; Henriksen, L, et al., "Industry sponsored anti-smoking ads and adolescent reactance: Test of a boomerang effect," *Tobacco Control* 15:13-18, 2006.
- ⁴⁰ American Legacy Foundation, "Getting to the Truth: Assessing Youths' Reactions to the truthsm and 'Think. Don't Smoke' Tobacco Countermarketing Campaigns," First Look Report 9, June 2002. http://www.americanlegacy.org/PDFPublications/fl_9.pdf. Sly, D & Heald, G, *Florida Anti-tobacco Media Evaluation (FAME) Follow-up Report*, February 2001. Teenage Research Unlimited, "Counter-Tobacco Advertising Exploratory," Summary Report, January-March 1999.
- ⁴¹ Teenage Research Unlimited, "Counter-Tobacco Advertising Exploratory," Summary Report, January-March 1999.
- ⁴² DiFranza, JR, & McAfee, T, "The Tobacco Institute: Helping Youth Say Yes to Tobacco," *Journal of Family Practice* 34(6):694-696, 1992.
- ⁴³ Vertiainen, E, et al., "Fifteen-Year Follow-Up of Smoking Prevention Effects in the North Karelia Youth Project," *AJPH* 88(1):81-85, 1998. Siegel, M, "Mass Media Antismoking Campaigns: A Powerful Tool for Health Promotion," *Annals of Internal Medicine* 129:128-132, 1998. Farrelly, MC, Niederdeppe, J & Yarsevich, J, "Youth tobacco prevention mass media campaigns: past, present, and future directions," *Tobacco Control*, 12(Suppl 1):i35-47, 2003. See also, Angus, K, et al., *The Effect of Tobacco Control Mass Media Campaigns, Counter-Advertising, and Other Related Community Interventions on Youth Tobacco Use*, University of Stirling, Institute for Social Marketing, January 2008.
- ⁴⁴ Secker-Walker, RH, et al., "A mass media programme to prevent smoking among adolescents: costs and cost effectiveness," *Tobacco Control* 6:207-212, 1997. See also, Friend, K & Levy, DT, "Reductions in smoking prevalence and cigarette consumption associated with mass-media campaigns," *Health Education Research* 17(1):85-98, 2002.