**SELECTED STATEMENTS RELATED TO ON-SCREEN SMOKING** *from*

[**Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General, 2012**](http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/index.html)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note: Page numbers refer to the print edition. To jump to the same page in the [PDF of the whole report](http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/#Full%20Report), add 20.

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The tobacco industry spends almost $10 billion a year to market its products, half of all movies for children under 13 contain scenes of tobacco use, and images and messages normalize tobacco use in magazines, on the Internet, and at retail stores frequented by youth. [Message from Howard Koh, Assistant Secretary for Health, PDF page 5]

This is a time in life of great vulnerability to social influences (Steinberg 2004), such as those offered through the mar­keting of tobacco products and the modeling of smoking by attractive role models, as in movies (Dalton et al. 2009), which have especially strong effects on the young. [Introduction, page 3]

In 2008, NCI published Monograph 19, *The Role of the Media in Pro­moting and Reducing Tobacco Use* (NCI 2008). Although young people were not the sole focus of this Monograph, the causal relationship between tobacco advertising and promotion and increased tobacco use, the impact on youth of depictions of smoking in movies, and the success of media campaigns in reducing youth tobacco use were highlighted as major conclusions of the report. [Introduction, page 5]

Chapter 5 (“The Tobacco Industry’s Influences on the Use of Tobacco Among Youth”) includes data on marketing expenditures for the tobacco industry over time and by cat­egory, the effects of cigarette advertising and promotional activities on young people’s smoking, the effects of price and packaging on use, the use of the Internet and movies to market tobacco products, and an evaluation of efforts by the tobacco industry to prevent tobacco use among young people. [Organization of the Report, page 6]

[#] 6. The evidence is sufficient to conclude that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people. [Chapter Conclusions, page 10]

Youth are also exposed to tobacco imagery through product placements in movies, television shows, and video games**.** Exposure to fictional characters who smoke can create an exaggerated social norm about the prevalence and acceptability of smoking (Sargent et al. 2000). Indeed, longitudinal studies have found that adolescents whose favorite movie stars smoke on screen or who are exposed to a large number of movies portraying smokers are at a high risk of smoking initiation (Sargent et al. 2000; Distefan et al. 2004). For example, among 10- to 14-year-old adolescents, those in the highest quartile of exposure to smoking in movies were 2.6 times as likely to initiate smoking as were those in the lowest quartile (Sargent et al. 2005). [Chapter 4, pages 437-438]

In general, the available evidence suggests that (1) nonsmoking policies create antismoking social norms and decrease smoking behavior, and (2) exposure to proto­bacco media messages, particularly in movies or advertis­ing, increases perceptions of the acceptability of smoking and thus increases smoking behavior. [Chapter 4, Summary, page 439]

Advertising, promotion, industry-sponsored antismoking ads, and smoking in movies all directly influence distal-level factors, such as exposure to other smokers, peer attitudes, cultural prac­tices, and beliefs about smoking consequences (both posi­tive and negative)…. These distal-level factors carry the influence of the tobacco industry all the way down to actual intentions and behavior.

…Specifically, repeated exposures to advertis­ing, promotion, and smoking in the movies can amplify the effects of the industry’s influences on the social-contextual and cultural-environmental streams of influence.

…Smoking in the movies can influence both social-contextual and cultural-envi­ronmental streams…the relationship between industry marketing, depic­tions of smoking in movies, and youth smoking are moderated mediation pathways: the influences of advertising, promotion, and smoking in the movies are mediated by distal factors (e.g., peer influence, family, culture), and that mediation effect on proximate factors is moderated by more exposure to the influence of the tobacco indus­try and depictions of smoking (Muller et al. 2005). [Chapter 5, pages 509-11]

This section addresses the impact of images of smoking in the entertainment media—primarily mov­ies —which have been the focus of most of the research in this area. Much of that research involves the impact of depictions of smoking in movies on the uptake of tobacco by adolescents. As described below, from the 1920s to 1989 the tobacco industry entered into a variety of financial arrangements to tie smoking to movies (Mekemson and Glantz 2002). Movies receive greater First Amendment protection than commercial speech such as advertis­ing and promotional materials. Indeed, some argue that tobacco control initiatives should not meddle with movie­makers’ intentions to depict the realities of life, including smoking (Chapman 2009). Others argue that the movies to which adolescents are drawn often have nothing to do with reality (e.g., *Avatar*) and that movies are not sim­ply art: they are products created by the entertainment industry to be sold to specific audiences. The rating of the film is part of the marketing effort for the film and the desired rating is generally decided before the film is made so overall content, language, sexual content, and violence can be calibrated to secure the desired rating. Nearly one-half (44%) of top-grossing films in the United States between 2005 and 2010 were rated PG-13, making them easily accessible to youth over the age of 13 years (Nash Information Service LLC 2011). The decision to include smoking in movies ultimately rests with the people who create the movies and the studios that pay for their production and distribution; any effort to affect when smoking is portrayed in movies and other entertainment media is logically focused on the production studios rather than on the tobacco industry.

Images of smoking in the entertainment media are a potentially powerful socializing force among adolescents, in part because they are communicated by people who are identified by youth as media stars (Bandura 1977, 1986). Adolescents actively rely on external information as they seek to shape their own identities, often looking to media stars as models of what to wear and what to do. Adoles­cents today are highly exposed to entertainment media, which—because they present smoking in the context of a story rather than as a commercial presentation—tend to dispel the skepticism that would attend a commercial pre­sentation. The suspension of disbelief that occurs in view­ing entertainment media, and the fact that the message is conveyed by an influential figure, provides a theoreti­cal underpinning for an effect of entertainment media on smoking during adolescence a strong one (Bandura 1977, 1986). More important, because some image advertising has been curtailed by the Master Settlement Agreement, entertainment media are among the few remaining chan­nels for transmission of aspirational images of smoking to large audiences (Kline 2000). [Chapter 5, page 564]

Lum and colleagues (2008) found evidence of commercial relationships between the tobacco and movie industries in tobacco documents dating from as early as 1929. FTC investigations in 1930 ended this practice, and the tobacco and motion picture industries turned to cross-promotion arrangements (termed “tie-ins”), in which endorsements of cigarette brands by movie stars were used to advertise those brands and garner publicity for newly released movies.

…Placement of products in movies, including tobacco, became an integral part of film production with the advent of product placement agencies in the late 1970s (Mekem­son and Glantz 2002; Segrave 2004)…”[S]ponsorship provides an opportunity to deliver subtle but powerful institutional and product messages to a young group, still in its stages of forming purchas­ing habits” (Breidenbach 1987, Bates No. 91753669/3670, p. 1).

Evidence from tobacco company documents has provided confirmation of a commercial relationship between the tobacco industry and film studios that began in the 1920s and lasted until it waned in the 1950s, the era when advertising dollars began flowing away from movies and into television (Lum et al. 2008). There was a resurgence of tobacco product placement in the movies during the 1970s after cigarette advertising was banned on television (Mekemson and Glantz 2002). [Chapter 5, pages 565-566]

A review conducted by NCI (2008), which summarized the results of 14 content-coding studies, concluded that ciga­rette and cigar smoking is pervasive in movies but use of smokeless tobacco is not, and it found that identifiable cigarette brands appeared in about one-third of mov­ies released during the 1990s. It also concluded that (1) the prevalence of smoking among contemporary movie characters is approximately 25%, about twice that of mov­ies of the 1970s and 1980s; (2) smokers in movies differ from smokers in the general population, the former being more likely to be affluent and White; (3) the health conse­quences of smoking are rarely depicted in movies; and (4) smoking in the movies is not related to box office success. [Chapter 5, page 566]

In a section titled “Prohibition on Payments Related to Tobacco Products and Media,” the Master Settlement Agreement prohibits payments for branded product placement in motion pictures, television shows, theatri­cal productions, music performances, and video games (NAAG 1998a). This agreement is binding only on the domestic cigarette companies that signed the agreement, not on their international counterparts or companies outside the United States or nonparticipating domestic tobacco companies.

Individual state attorneys general are responsible for enforcing these and other provisions of the agreement. The agreement is ambiguous, however, on whether the rules apply only to brand placement or to all product placement, including unbranded placements; the attorneys general have sought to enforce only branded placements.

Since the signing of the agreement, studies have reported declines in the placement of [branded] tobacco products in films (Adachi-Mejia et al. 2005; Worth et al. 2007; CDC 2010, 2011). [Chapter 5, page 566]

Sargent and Heatherton (2009) compared trends for smoking in the top 25 box office hits each year from 1990 to 2007 with trends in youth smok­ing derived from the MTF survey. Figure 5.10, which is based on their work, illustrates parallel downward trends for movie smoking and adolescent smoking among eighth graders after 1996. The authors stated, “Movie smoking represents only one of several factors that contribute to youth smoking trends…. Nonetheless, the downward trend in movie smoking is consistent with an influence on downward trends in adolescent smoking” (p. 2212). [Chapter 5, pages 567-569]

CDC published two long-term content analyses of smoking in the movies (CDC 2010, 2011) in which the sampling frame was all motion pictures that were in the top 10 films for box office receipts for at least 1 week…. Using this approach, the total number of tobacco incidents in all top-grossing films has been declining since 2005. Despite this decline, there is still a substantial amount of smoking in youth-rated (G, PG, PG-13) movies. Thus, while there are some differences in results among studies using different approaches for measuring the level of onscreen smoking in films, all available studies show a decline in the level of exposure since at least 2005. [Chapter 5, page 569]

Beginning in 2004, three motion picture companies adopted and began to enforce written policies designed to reduce the amount of smoking in their films: Disney in October 2004, Time Warner in July 2005 (updated in July 2007), and Universal (then part of General Electric and since purchased by Comcast) in April 2007…. From 2005 to 2010, among these three major motion picture companies (one-half of the six members of the Motion Picture Association of America [MPAA]), the number of tobacco incidents per youth-rated movie decreased 95.8% from an average of 23.1 incidents per movie to an average of 1.0 incidents (CDC 2010)…. While the policies voluntarily adopted during 2004–2007 by the three major motion picture companies (Disney, Time Warner, Universal) have excluded nearly all tobacco incidents from their top-grossing youth-rated movies, none of the three company policies completely banned smoking or other tobacco imagery in the youth-rated films they produced or distributed (CDC 2011). Given the continuing varying performance among motion picture companies in reducing tobacco imagery in youth-rated films, WHO (2009) and numerous public health and health professional organizations have recommended giv­ing movies with tobacco incidents an R rating, with excep­tions: those that portray a historical figure who smoked and those that portray the negative effects of tobacco use (CDC 2011).

…It has been noted that even if stronger policies were adopted banning smoking or other tobacco imagery in youth-rated movies, such policies would not affect youth exposures to older movies that have already been released and are available as downloads, rentals, and on television (CDC 2011). Also, evidence indicates that youth view some R-rated movies (Sargent 2007b). Therefore, antitobacco ads have been recommended for showing before movies that depict smoking (USDHHS 2010). [Chapter 5, pages 570-571]

Recent content analyses of tobacco use in movies have documented a general decline in the appearance of tobacco brands and in depictions of tobacco use overall, especially since 2005 (Table 5.12). These trends suggest that the movie industry is responding to research and heightened attention to the issue applied by the public health community and the state attorneys general.

While these declines demonstrate the practicality of enacting policies to reduce tobacco incidents in youth-rated movies, it has been recommended that expanding the R rating to include movies with smoking could further reduce exposures of young persons to onscreen tobacco incidents (CDC 2011). [Chapter 5, Summary, page 571]

The exposure studies described in this section docu­ment the fact that movies overall deliver billions of smok­ing impressions to adolescents and conclude that how movies are rated affects these exposures....

These studies underline the large impact that decisions by ratings boards can make on the exposure of youth to smoking in movies; because fewer youth see adult-rated movies, a mandate by the rat­ings board to give movies with smoking an adult rating would greatly reduce the exposure of youth to smoking in those movies….

Further, it has been noted that almost all states offer movie producers subsidies in the form of tax credits or cash rebates to attract movie production to their states, totaling approximately $1 billion annually (CDC 2011). Millet and associates (2011) have reported that the 15 states subsidizing top-grossing movies with tobacco inci­dents spent more on these productions in 2010 ($288 mil­lion) than they budgeted for their state tobacco control programs in 2011 ($280 million).

The conclusion of Chapter 5 of the 1994 Surgeon General’s report on smoking in young people emphasized the importance of the advertising of images in making use of cigarettes attractive to youth… Today, the delivery of billions of glamorized images of smoking by movie and television stars offers a stark contrast to the current landscape for tobacco advertising. Because some image-based tobacco advertising has been eliminated by the Master Settlement Agreement, images of smoking in movies and television may today be some of the more potent media-delivered smoking images seen by U.S. children and adolescents. The effect is compounded by the fact that many U.S. films are eventually released on television, DVD, or online, where they can reach an inter­national audience. Thus, they have the potential to expose adolescents around the world to role models who smoke. [Chapter 5, page 574]

In summary, the results from cross-sectional stud­ies are consistent with an association between exposure to smoking in movies and youth smoking. [Chapter 5, page 575]

In summary, longitudinal studies have found con­sistent associations between exposure to movie smoking and the onset of smoking among adolescents (early vs. late smoking outcomes are addressed below). [Chapter 5, page 592]

Although policies to reduce smoking in youth-rated movies might limit adolescents’ exposure to movie smok­ing, about 40% of the exposure to this risk factor comes through adolescents watching movies rated for adults. Thus, an additional approach to limiting risk would be to encourage parents to control the exposure of their chil­dren to adult-rated movies. Observational studies, sum­marized in Table 5.14, suggest that this strategy could be complementary to policies aimed at eliminating smoking from youth-rated movies (Dalton et al. 2002a, 2006; Sar­gent et al. 2004; Thompson and Gunther 2007; Hanewin­kel et al. 2008).

…The evidence that parental restrictions on the viewing of R-rated movies translate into lower risk for the onset of their children’s smoking has two important implications for policy. First, it is evidence that active intervention to lower the level of exposure to on-screen smoking (the “dose”) leads to lower risk of smoking (the “response”), and that intervention to move down the dose-response relationship between exposure to smoking in movies and youth smoking is possible. Second, because youth still receive a substantial amount of their exposure to on-screen smoking from youth-rated (mostly PG-13) films (Figure 5.11), even children of parents who vigor­ously enforce the R rating will receive substantial expo­sure to on-screen smoking. [Chapter 5, page 593]

Consid­ering the OR to be an approximation of the RR, a random effects meta-analysis of all 17 studies provided an overall estimate of the risk of smoking as a function of high expo­sure to movie smoking to be 1.93 (95% CI; 1.64–2.27). In addition, the population-attributable risks for the four studies that provided such estimates (Dalton et al. 2003, 2009; Sargent et al. 2005; Titus-Ernstoff et al. 2008) yielded an overall population-attributable risk fraction of 0.44 for adolescent smoking due to exposure to smoking in movies (Millett and Glantz 2010). Because of the very widespread exposure to smoking in movies, and because movie exposures are not viewed with the same skepticism as marketing messages, some authors suggest that movie smoking may account for a larger fraction of the onset of youth smoking than does traditional cigarette advertising (Glantz 2003; Sargent and Hanewinkel 2009; Sargent et al. 2009a).

…Since the meta-analysis discussed above was pre­pared, several additional epidemiological studies on the links between on-screen smoking and adolescent smok­ing have been completed that reinforce the conclusions of earlier work. [Chapter 5, page 593]

Since this state­ment was issued, population-based cross-sectional stud­ies have shown that movies deliver billions of images of smoking to young audiences.

An MPAA policy to give films with smoking an R (adult) rating, as recommended by WHO (2009), CDC (2011), and other authorities, could eliminate youth-rated films as sources of exposure to on-screen smoking imag­ery and reduce the exposure of youth to smoking in mov­ies. The adoption of such policies would contribute to a reduction in adolescent smoking behavior. Some U.S. film studios have begun to respond to public pressure through the development of internal mechanisms to limit the depiction of smoking in movies.

Experimental studies provide strong and consistent support for the idea that an antismoking advertisement shown before a movie that contains smoking scenes influ­ences how moviegoers view smoking and react to it; sev­eral studios have already adopted this practice.

Finally, population-based studies provide evidence to support the idea that parental restrictions on view­ing R-rated movies reduces exposure to such movies and the risk of early onset of smoking when restrictions are applied during late childhood and early adolescence. Moreover, practices of restricting and monitoring media appear to work independently of more traditional types of parenting factors, such as authoritative parenting. How­ever, parental restrictions would not address the substan­tial exposure of youth to smoking imagery in movies rated G, PG, and PG-13. [Chapter 5, Summary, page 598]

An NCI monograph that reviewed influences of the media on tobacco use by youth concluded that exposure to depictions of smoking in movies causes tobacco use among adolescents (NCI 2008). Since that report was issued, multiple population-based cross-sectional studies have provided consistent evidence supporting a causal relation­ship between exposure to smoking images in movies and smoking among youth in the United States. Although the incidence of on-screen smoking in movies has declined steadily since 2005 and one-half of MPAA member movie studios have adopted policies designed to reduce smoking images in their films, movies overall continue to deliver billions of these images to adolescents. Cross-sectional and longitudinal population studies have demonstrated an association between exposure to smoking in mov­ies and smoking among youth in samples of U.S. White and Mexican American adolescents. Research cited in this chapter has shown that the association between exposure to smoking images in movies and youth smoking has a more important effect on the early phases of smoking ini­tiation than on the transition to addiction. Experimental studies have suggested that an antismoking advertisement shown before a movie that contains smoking scenes can influence how moviegoers view smoking. Evidence indi­cates that parental restrictions on viewing R-rated mov­ies reduces exposure to such movies and the risk of early onset of smoking when restrictions are applied during late childhood and early adolescence. Finally, recent evidence supports expanding the R rating to include movies with smoking in order to further reduce exposures of young persons to onscreen tobacco incidents, making smoking initiation less likely. [Chapter 5, Evidence Summary, page 601]

[#] 6. The evidence is sufficient to conclude that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people. [Chapter 5, Conclusions, page 602]

In addition, social and environmental fac­tors are recognized as increasing risk for, or providing protection against, smoking by young people and are used as venues for prevention…. Other eco­logically driven efforts involve reducing youth access to tobacco products, increasing taxes on tobacco, enacting clean indoor air policies, and reducing images of smoking in movies. [Chapter 6, page 631]

The situation is unfortunately complicated by the fact that the social and environmental factors that pro­mote tobacco use continue to evolve…. Sim­ilarly, images of smoking in the entertainment media, par­ticularly movies, have created a prosmoking environment that causes the initiation of smoking and its continued use.

Chapter 5 also provided a comprehensive review of the impact of smoking in the movies and the evidence linking exposure to images of smoking in the entertain­ment media to the initiation of adolescent smoking. Evidence indicates that there is a strong dose-response relationship between the number of smoking depictions viewed by nonsmoking adolescents and the rate of initia­tion of smoking in that group. Fortunately, there is evi­dence that efforts to reduce exposures to such depictions of smoking, such as parental restrictions on what their children may watch, can reduce risks of smoking initia­tion. More promising still is the potential for policies that will discourage depictions of smoking in movies viewed by children. Recent evidence indicates that new policies may already be leading to declines in the level of smok­ing imagery in youth-rated movies (CDC 2011a), but depictions of smoking in DVDs (digital video discs), cable channels, and other media remain common and continue to create a social environment that presents smoking as socially acceptable and appealing to youth. [Chapter 7, pages 851-852]

Tobacco company advertising and promotional activities cause adolescent and young adult smok­ing initiation and are compounded by depictions of smoking in the movies. [Chapter 7, Final Call to Action, page 856]

**SELECTED STATEMENTS FROM**

[**Executive Summary**](http://www.surgeongeneral.gov/library/preventing-youth-tobacco-use/exec-summary.pdf)

Even exposure to smoking by actors in movies increases the likelihood that a young person will begin to smoke (Sargent et al. 2001, 2005; Hanewinkel and Sargent 2007; Thrasher et al. 2008). [page 2]

The evidence is sufficient to conclude that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people. [page 6]

Greater consideration of further restrictions on advertising and promotional activities as well as efforts to decrease depictions of smoking in the movies is warranted, given the gravity of the epidemic and the need to protect young people now and in the future. [page 7]

**SELECTED STATEMENTS FROM**

[**Consumer Booklet**](http://www.cdc.gov/tobacco/data_statistics/sgr/2012/consumer_booklet/pdfs/consumer.pdf)

MOVIES

For many years, tobacco companies paid studios to have their products appear in movies. Even though this practice is no longer allowed, movies for youth, and even some movies for children, may include images of characters using tobacco. These images are powerful because they can make smoking seem like a normal, acceptable, or even attractive activity. Young people may also look up to movie stars, both on and off screen, and may want to imitate behaviors they see.

Over time, the number of images of tobacco use in movies has gone down. But movies still contain thousands of images of tobacco use that are proven to encourage young people to start smoking. In 2010, nearly a third of top-grossing youth-rated movies—those with G, PG, or PG-13 ratings—contained images of tobacco use. [page 9]

Enforce movie age restrictions—and discourage teens from playing video games or using other media that feature smoking. [page 12]

**SELECTED STATEMENTS FROM**

[**Fact sheet (English)**](http://www.surgeongeneral.gov/library/preventing-youth-tobacco-use/factsheet.html)

Youth who are exposed to images of smoking in movies are more likely to smoke. Those who get the most exposure to onscreen smoking are about twice as likely to begin smoking as those who get the least exposure. Images of smoking in movies have declined over the past decade; however, in 2010 nearly a third of top-grossing movies produced for children—those with ratings of G, PG, or PG-13— contained images of smoking.

[**Hoja informativa (Español)**](http://www.surgeongeneral.gov/library/preventing-youth-tobacco-use/hoja-informativa.html)

Los jóvenes expuestos a imágenes de personas fumando en la pantalla tienen más probabilidad de fumar. Los que tienen más exposición a películas en las que se fuma tienen casi el doble de probabilidad de empezar a fumar que los que tienen menos exposición. Las imágenes de personas fumando en las películas han disminuido en la última década; sin embargo, en el 2010 casi un tercio de las películas más taquilleras dirigidas a niños, de clasificación G, PG o PG-13, contenía imágenes de personas fumando.

**Excerpted by the University of California, San Francisco,** [**Center for Tobacco Control Research and Education**](http://www.tobacco.ucsf.edu)