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Introduction

Imagery emanating from motion pictures continues to provide misleadingly positive impressions of tobacco use. These images have now been identified as a cause of smoking initiation among adolescents. In 2008, the National Cancer Institute of the United States of America concluded that:

“the total weight of evidence from cross-sectional, longitudinal, and experimental studies, combined with the high theoretical plausibility from the perspective of social influences, indicates a causal relationship between exposure to movie smoking depictions and youth smoking initiation”(1).

Parties to the WHO Framework Convention on Tobacco Control (WHO FCTC) are required to implement a comprehensive ban on tobacco advertising, promotion and sponsorship according to Article 13 of the treaty (2). The guidelines for implementation of Article 13 recognize that the depiction of tobacco in films is a form of tobacco promotion that can strongly influence tobacco use, particularly among young people, and recommends a set of specific measures, which are addressed more fully within this report (3). In some countries, many of the youth-rated films that contain tobacco imagery are the recipients of significant government production subsidies. These subsidies indirectly promote tobacco use through media, and therefore are counter to WHO FCTC Article 13 and its guidelines. The issue of subsidies will also be discussed in greater depth in this report.

In the past, movies have been an important vehicle for cigarette and other tobacco product (4)¹ placement, a form of advertising of tobacco products, as well as social learning (5)² about smoking. The marketing of tobacco in the movies, particularly movies originating from countries with the most active movie industries, remains an important vehicle for promoting smoking, including in films rated as suitable for children and adolescents.

Voluntary agreements with the tobacco industry to limit smoking in movies have not and cannot work because the fiduciary interests of the tobacco industry are opposite to those of the public health community. In the United States, the Master Settlement Agreement (MSA) between states’ Attorneys General and the major domestic tobacco manufacturers included a provision in which the manufacturers agreed to a prohibition on paid tobacco product placement in movies (6). However, evidence shows that smoking incidents increased in movies released subsequent to the MSA’s 1998 implementation, peaking in 2005 (7).

Logic and science now support enforceable policies to reduce substantially smoking imagery in all film media. Measures to limit movie smoking, including those outlined in the Article 13 guidelines, and to end public subsidies for the production of movies with smoking, can ensure that motion pictures will no longer serve as a source of tobacco promotion aimed at young people. In addition, strong and enforceable policy measures can be supported by programmes to educate the public and policy-makers, as well as the entertainment industry, on the value of reducing young people’s exposure to tobacco imagery.

1 Historically, cigarettes have been by far the most common tobacco product depicted in films, so this report concentrates on smoking in films. In recent years, the major cigarette companies have acquired smokeless tobacco firms and often promote these products using the same brand names as their major cigarette brands. In addition, new « e-cigarettes » have been promoted through motion picture tie-ins. Policy-makers need to integrate these changes into the tobacco marketplace when developing and implementing policies on tobacco product promotion in films and other media

2 The social learning theory of Bandura emphasizes the importance of observing and modelling the behaviours, attitudes and emotional reactions of others.

This document summarizes current knowledge about smoking in movies, as well as current and proposed approaches to reduce the impact of this imagery. The report aims to help countries understand the basis for taking action to limit the depiction of smoking in movies. This report can help the Parties to the WHO FCTC implement specific recommendations related to smoking in movies that are included in the Article 13 guidelines. In addition, it is expected that the report will also be useful to those countries that are not yet party to the treaty by helping them implement this important component of a comprehensive ban on tobacco advertising, promotion and sponsorship.

1. Tobacco on screen: why this is a problem?

In the past, the tobacco industry has spent millions of dollars to maintain the portrayal of smoking in movies (8). The role of movies as vehicles for promoting smoking has become even more important as other forms of tobacco promotion are constrained. As shown in Figure 1, this investment³ is part of a wider and more complex marketing strategy to support pro-tobacco social norms, including product placement in mass media, sponsorship and other modalities. In this figure, cinema is shown to be a core element in mass media approaches to normalizing smoking.

According to the British Medical Association (BMA) (9), the United States National Cancer Institute (1), the United States Centers for Disease Control and Prevention (CDC) (7) and other sources, there are several reasons why smoking in movies should be addressed as a public health problem: movies reach every corner of the globe, effectively promote smoking and have done so without much public health scrutiny until now.

Figure 1: The nested relationships among advertising, marketing communications, consumer marketing and stakeholder marketing in tobacco promotion



Source: National Cancer Institute (1).

3 For the monetary value of tobacco companies' documented spending on Hollywood product placement agencies 1979-94, see <http://www.smokefreemovies.ucsf.edu/problem/bigtobacco.html>.

1.1. MOVIES REACH EVERY CORNER OF THE WORLD

At least 7300 feature-length movies were produced and released in 2009 (many directly to video) in 50 nations worldwide, including: 1341 (18%) in the European Union, 1288 (18%) in India, 677 (9%) in the United States of America, 456 (6%) in the People's Republic of China and 448 (6%) in Japan (10). The small fraction of all movies produced in the United States accounts for more than half of global investment in movie production and distribution (11) and has consistently earned 60-70% of box office receipts outside the United States (12)⁴. A survey of 50 countries found only five in which the movies produced in those countries accounted for more than half of domestic theatre box office in 2008-2009: the United States (97%), India (90%), China (61%), Japan (58%), and Turkey (52%) (13).

The tobacco industry knows that motion pictures are one of humanity's most common entertainment experiences. The world spends approximately US\$ 120 billion a year to view films through legitimate distribution channels: US\$ 30 billion (25%) for single viewings in theatres and US\$ 90 billion (75%) for films on recorded video, over broadcast, satellite or cable, and through digital streaming or download. With 42 000 screens, 28% of the 150 000 global total, Canada and the United States accounted for one third of movie box office sales in 2010. Africa, Europe and the Middle East contributed another 33%, Asia and the Pacific region 27%, and Latin America 7% (14-16)⁵. India leads in actual admissions (2.9 billion in 2009) followed by the United States (1.3 billion) and China (264 million) (17). As movies have become more widely available on video and digital media, per capita admissions to movie theatres have stabilized or dropped since 2005 in some major economies, but increased in others as theatres have upgraded to digital and 3-D presentations (18). Rapid spread of multiple media platforms for viewing movies outside of theatres, across cultures and economies, means that exposure to film content is vastly underestimated by movie theatre attendance data alone (see Annex A).

1.2 MOVIES ARE EFFECTIVE IN PROMOTING SMOKING

Exposure to smoking in movies is high

An analysis of more than 1300 feature films accounting for 96% of all ticket sales in the United States between 2002 and 2010 found that tobacco imagery permeated both youth-rated (G/PG/PG-13) and adult-rated (R) movies, with 62% of top-grossing (19)⁶ films featuring tobacco imagery. More specifically, 81% of all R-rated movies included smoking, while smoking appeared in 66% of movies rated PG-13 and 27% of movies rated G or PG. Altogether, top-grossing movies of all ratings distributed in the United States between 2002 and 2010 contained approximately 7500 tobacco incidents⁷. Of these incidents, 56% were in movies rated R; 39% in movies rated PG-13; and 5% in movies rated G or PG (see Box 1 for an explanation of the United States' rating system). The number of tobacco incidents peaked in 2005, at 1170, declining to 535 incidents in 2010. The greatest decline was shown in G and PG films (94%) and the least in R-rated films (39%). Over the same period, the share of PG-13 films with tobacco imagery ebbed from 60% to 43%, compared to 80% in 2002 (7).

4 For example, of the 165 films attracting two million or more moviegoers in the European Union in 2010, 118 (72%) were United States productions. Of the top 50 box office films in the European Union that year, 47 (94%) were United States films; and of the top 100, 80%.

5 The MPAA reports that, on average, films earn three-quarters of their total sales revenue in all media "in markets subsequent to initial theatrical release".

6 Definition: films that ranked among the top 10 in box office earnings in the "domestic" (Canada and the United States) film market for at least one week of their initial ("first-run") theatrical release. From 2002 to 2008, this sample included 83% of all films released to theatres and 96% of all movie tickets sold in the domestic market.

7 There are two different ways of counting "incidents", depending on how one handles cuts back and forth in a single scene. One approach, used by Dartmouth University (and this report), counts use of tobacco by an individual in a single scene as one impression even if the camera cuts back and forth between a smoker and non-smoker. A second approach, used by the Thumbs Up! Thumbs Down! Project (<http://www.scenesmoking.org>), counts each cut as a separate incident. These two approaches yield closely correlated results: the Thumbs Up! Thumbs Down! approach leads to counts that are, on average, 3.4 times the Dartmouth approach. Both methods are equally valid for tracking changes over time.

Hollywood films containing tobacco imagery continue to earn billions of dollars globally, including in countries that have taken strong measures against tobacco advertising and promotion (see Box 2 for more on worldwide tobacco image exposure in films produced in the United States). For example, in China in 2009, the United States-produced film "Avatar" earned US\$ 182 million at the box office while delivering 187 million tobacco impressions to theatre audiences there [20]⁸.

Box 1: The film rating regime in the United States

Since 1968, film ratings in the United States have been assigned by the Motion Picture Association of America (MPAA), the trade group of major film studios, and by the National Association of Theatre Owners, which jointly operate the Classification and Rating Administration. Submitting a film for classification is voluntary, as is rating observance by theatres and video retailers, but is practically universal among commercial, non-pornographic film and video distributors.

Motion Picture Association of America rating categories:

- G: General audiences – all ages admitted
- PG: Parental guidance suggested – some material may not be suitable for children
- PG-13: Parents strongly cautioned – some material may not be suitable for children under 13
- R: Restricted – under 17 requires accompanying parent or adult guardian
- NC-17: No one under 17 admitted (21).

From 2002 to 2010, 22% of films widely released to theatres in the United States were rated G or PG, 46% were rated PG-13; 33% were rated R; almost none were rated NC-17 (19).

Various methods have been used to measure the exposure of adolescents to tobacco imagery in movies (see Annex B). Although there is a lack of available data on in-home media, it is possible to estimate tobacco imagery exposure that adolescents receive from motion pictures using publicly available cinema audience composition and box office sales data⁹. Adolescents aged 12-17 are consistently reported to be the most frequent moviegoers. In 2010, American and Canadian adolescents saw an average 8.0 movies in theatres, compared to 3.4 for children aged 2-11, 7.2 for young adults aged 18-24, 5.2 for adults aged 25-39, and 2.9 for adults aged 40 and over (15)¹⁰. American audience survey data from 2006 indicates that 59% of adolescents reported going to see three or more movies in the previous 90 days, compared to 39% of young adults (22). On average, adolescents were twice as likely to have seen four or more films in the past three months than young adults (23). While they comprise 8% of the population of the United States, adolescents make up 18% of all "frequent" moviegoers who see films at least once a month and 23% of all those who see at least one film a week (14). According to United States data, frequency of movie going increases through adolescence: more than 40% of adolescents who are frequent moviegoers are 16-17 years of age, while 26% are 12-13 years of age (24).

Based on American 2006 audience age composition (by rating), box office (gross revenue from ticket sales, by film), and tobacco imagery incidence (by film) for the period 2002-2009, viewers aged 12-17 were subject to 18% of the 188 billion estimated tobacco impressions delivered by films in theatres

8 Calculated on the number of tobacco incidents in Avatar (<http://www.scenesmoking.org>) multiplied by the film's paid admissions in China: reported box office earnings (<http://www.boxofficemojo.com>) divided by reported ticket price.

9 Data on age composition are gathered commercially, e.g. for targeting in-theatre advertising campaigns. Motion Picture Association branches around the world may also have this data; the United States branch routinely disaggregates age in its attendance statistics but not publicly by film rating.

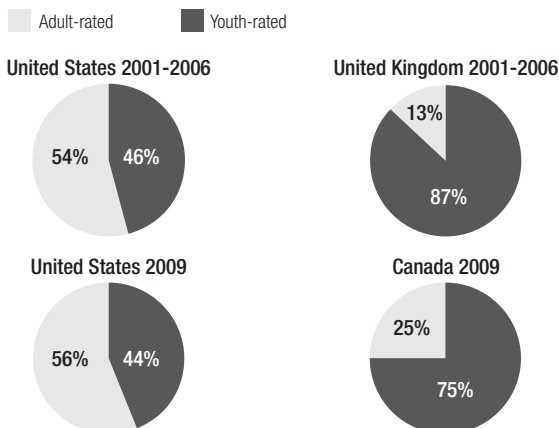
10 Per capita tickets sold, by age group, were calculated with United States Census data population estimates.

in Canada and the United States, or 4.1 billion tobacco impressions annually on average^{11,12}. Adolescents comprised nearly 17% of the audience for G/PG movies, more than 20% of the audience for PG-13 movies, and more than 10% of the audience for R-rated movies in theatres. In this period, 71% of tobacco impressions delivered to adolescents came from PG-13 movies, about 1% from G/PG movies, and 28% from R-rated movies, which have substantially higher tobacco content. Associated with the decline in tobacco incidents after 2005 (7), in-theatre tobacco impressions delivered to adolescents fell 50% to 2.6 billion. However, as media platforms have multiplied and digital access to films has accelerated, trends in adolescents' total exposure are uncertain. An observational study of a large sample of American adolescents also found that movies deliver billions of tobacco impressions to this age group and that even younger adolescents aged 10-14 receive nearly 40% of their tobacco exposure from higher-incidence R-rated films (25). These results include movies seen by any means and suggest that while adolescents see significantly fewer R-rated films than unrestricted films, they encounter somewhat more R-rated films outside of theatres. Despite this exposure to R-rated films, however, youth receive the majority of their exposure to on-screen smoking through youth-rated films.

Film classification policies shape adolescent exposure

Adolescent exposure to on-screen smoking is substantially higher in countries where film classification regimes assign youth ratings to many movies rated R in the United States. A survey of top-grossing films released in both Canada and the United States in 2009 found that province-level rating agencies in Canada classified 60% of films rated R in the United States as suitable for young people under 18 years of age without restriction. Consequently, movies youth-rated in Canada (PG/14A) delivered 60% more in-theatre tobacco impressions (population-adjusted) than youth-rated films in the United States in the same year (26). In the United Kingdom between 2001 and 2006, 79% of films rated R in the United States were permitted to be marketed to adolescents without restriction, so that films youth-rated in the United Kingdom delivered 93% of in-theatre tobacco impressions and boosted adolescent exposure by an estimated 28% compared to the United States adolescent exposure (27). A large majority of tobacco incidents were also to be found in the movies youth-rated in Canada and the United Kingdom, while about half were in youth-rated films in the United States (Figure 2).

Figure 2: Comparison of shares of total tobacco incidents in films youth- and adult-rated in the United States and the United Kingdom, 2001-2006, and in the United States and Canada, 2009



11 Calculated from Nielsen Media Research, 24 June 2005 – 22 June 2006.

12 "Tobacco impressions" are calculated by multiplying a movie's tobacco incidents by its paid theatrical admissions. Admissions are estimated by dividing the movie's total gross domestic box office sales (reported by authoritative industry sources) by the average movie ticket price for the year in which the film was released. The National Association of Theatre Owners (United States) establishes the average ticket price (<http://www.nato-online.com>).

Exposure to smoking in movies increases adolescent smoking initiation

In 2008, the US National Cancer Institute concluded that smoking in movies causes adolescent smoking (1). That determination was based on several types of evidence:

- population-based scientific surveys that assessed exposure to smoking in movies and observed that such exposure was linked to having tried smoking [28-31];
- two other surveys showing that exposure to smoking in movies predicted smoking onset among adolescents [32, 33]; and
- experiments that found smoking in movies affected short-term attitudes, and that anti-smoking advertisements shown prior to movies with smoking blunted these effects [34].

Since the National Cancer Institute reached its conclusion of causality, large-scale epidemiological studies have confirmed similar effects on adolescents all over the world, including additional samples of adolescents in the United States [35-40], Germany [41, 42], Mexico [43, 44], European countries [45], and India [46]. In Germany, a 1999-2004 longitudinal study showed that 85% of movie smoking exposure came from internationally distributed (mainly Hollywood) movies; researchers concluded that "smoking in internationally distributed movies [the majority from the United States] predicts trying smoking among German adolescents" [42]. Based upon population studies in the United States reported for 2003-2009, it is estimated that exposure to on-screen smoking accounts for 44% [95% confidence interval (CI) 0.34-0.58] of new adolescent smokers in the United States [47] (Table 1).

Almost all of the studies show there is a dose-response; the more on-screen smoking that adolescents see, the more likely they are to smoke. Several studies link movie smoking with more advanced stages of smoking, such as smoking in the past 30 days [44, 48] or having smoked 100 or more cigarettes in their lives [37, 39]. Others have shown an association between movie smoking and more favourable attitudes towards smoking [49-51]. One study has found an association between smoking in movies and smoking among young adults [52], indicating that movie effects may not be confined to adolescents.

Consistent with the findings of these population-level epidemiological studies, a number of experimental studies have confirmed that seeing a smoking film shifts attitude in favour of smoking [53], and that an anti-smoking advertisement shown prior to a film with smoking blunts the effect of smoking imagery [54-56]. While only one study failed to find an influence of smoking in movies on smokers' reported desire to smoke [57], another experiment found young adult smokers who viewed a montage that included smoking scenes were more likely actually to smoke during a break and immediately after the session than were those who viewed a smoke-free montage [58]. One study assessed brain response to movie segments with smoking in adult smokers [59]. Their brains showed activity in areas responsible for craving as well as in prefrontal zones involved in motor planning for the right hand, suggesting they were preparing to light up in response to seeing actors smoke.

Table 1. Nations and sub-national units where movies have been linked with youth smoking¹³

1. England
2. Germany
3. China, Hong Kong SAR
4. Iceland
5. India
6. Italy
7. Mexico
8. New Zealand
9. Poland
10. Scotland
11. Thailand
12. The Netherlands

Movies are effective because they influence behaviour and form social norms

The social environment influences behaviour among children and adolescents. Young people watch others, especially those they admire, and emulate their behaviour (5). Movie characters providing the illusion of a face-to-face relationship with viewers are “para-social” (60) agents of ambition, aspiration and transformation: they can encapsulate dreams, craft hopes, and provide moments of excitement. Movies offer not only world-famous stars but also a fantasized view of life. Insofar as adolescents hope to take part in the glamorous and exciting lifestyles depicted in movies, they may adopt the behaviours they see in them (29). Thus, for the tobacco industry, films provide an opportunity to convert a deadly product into a status symbol or token of independence. In contrast to traditional advertising, movies from Hollywood, Bollywood and other film production centres provide powerful information about the “benefits” of smoking. It is not only the smoking behaviour of “positive” characters that young people emulate. Research shows that the villain who smokes can be even more influential on adolescents than the hero (61).

Experimental and observational studies show that cigarette smoking in films influences young people’s beliefs about social norms for smoking, as well as their beliefs about the function and consequences of smoking and their personal intention to smoke (34, 43, 49). The presentation of smoking in films does not reflect reality. In reality, smoking tends to be highest among lower socioeconomic groups, whereas in films, most characters, including smokers, are of high-socioeconomic status. Additionally, the real health consequences of smoking are rarely shown (62, 63). Young people, especially, look to celebrities for personal cues, group reference and validation. As they assemble their identities, films offer adolescents a catalogue of looks, attitudes and behaviours.

1.3 MOVIES HAVE ESCAPED TOBACCO CONTROL SCRUTINY UNTIL RECENTLY***Movie smoking increases when traditional advertising is restricted and has rarely been considered by policy-makers***

The WHO FCTC guidelines on banning tobacco advertising, promotion and sponsorship clearly state that the depiction of tobacco in entertainment media products, such as films, theatre and games is a form of tobacco advertising and promotion. However, the depiction of tobacco has been rarely regulated until now.

¹³ Studies available at http://smokefreemovies.ucsf.edu/godeeper/the_science.

Between 1978 and 1982, after the United States had barred broadcast advertising of tobacco products, four major United States tobacco companies established contractual relationships for product placements in motion pictures (64). Collaboration with the film industry has been documented to 1994. The 1998 Master Settlement Agreement reached between state-level Attorneys General in the United States and domestic tobacco companies barred tobacco product placement (65).

The effective substitution of on-screen tobacco imagery for traditional tobacco advertising is suggested by a survey of popular films in India. It found that tobacco brand display exploded in Bollywood (Hindi-language) films after tobacco advertising was banned in all other Indian media in 2004. The brand display was more or less evenly split between premium cigarette brands belonging to British American Tobacco (BAT) and its long-time Indian partner, the Indian Tobacco Company (ITC), and competing brands belonging to Philip Morris International (PMI), whose entry into India's market under liberalized trade rules coincided with the nation's tobacco advertising ban (66).

Even in countries with bans on tobacco advertising and promotion, movie imagery continues to provide misleadingly positive messages about smoking. In the United Kingdom, where almost all forms of tobacco advertising are prohibited, films from the United States that were youth rated in the United Kingdom between 2001 and 2006 contained 83% of all tobacco incidents and delivered 87% of tobacco impressions to theatre audiences (27). In Australia, a 2008 study found that 70% of top box office films contained smoking depictions, including 75% of the most popular PG-rated films (67). In Canada, a 2009 survey found that 75% of tobacco incidents appeared in youth-rated movies and a majority of these in G/PG films (26). Indeed, in countries that have successfully limited tobacco image advertising, movies deliver the vast majority of tobacco media imagery to youth.

Countries subsidize production of films with smoking imagery

Besides classifying films as an explicit or implicit condition of their distribution and promotion, countries and numerous jurisdictions (regions, states, provinces, cities) offer grants or tax breaks in favour of national and international film productions. In the case of national filmmakers, the object is often to support a national or language-specific film culture. Public subsidies to larger budget international film productions are designed to compete for their spending against other locations and, indirectly, to subsidize a local film industry. From 2008 to 2010, 14 nations or their sub-units awarded an estimated US\$ 2.4 billion to producers of 93% of the 428 films, mainly developed by companies based in the United States, which achieved top box office status in Canada and the United States. Half of these films featured tobacco imagery. Over three years, subsidized with US\$ 1.1 billion in tax credits, these films delivered an estimated total of 130 billion tobacco impressions to theatre audiences worldwide.

Canada (provinces and federal government), Germany, New Zealand, the United Kingdom and the United States (state governments) accounted for 91% of the value of subsidies to top-grossing films with smoking in the years 2008-2010, with the states in the United States contributing two thirds (US\$ 288 million) of all subsidies to top-grossing films with smoking¹⁴. Together, the American states that awarded these subsidies to top-grossing films spent slightly more on films with smoking than they allocated, in total, for their tobacco control efforts (US\$ 280 million) in 2011 (68) (Annex C).

¹⁴ The methodology used to calculate this was the subsidy rate offered by the primary production location listed for each top-grossing film multiplied by the amount of the film's estimated spending that was eligible for subsidy. The eligible spending (total published production budget less above-the-line costs, including producer, director, writer, composer and star actors' fees) was estimated by multiplying the total budget by a percentage [50-95%] graduated by budget size: small budget films spend a greater percentage on daily shooting costs commonly eligible for subsidy than large budget films. The results for California, the United States, were adjusted to eliminate many films released between 2008 and 2010 that began production before California started offering subsidies in 2009 as well as animated films ineligible for subsidies under its current programme.

Filmmakers claim “dramatic necessity” and free speech protection

Film industry representatives sometimes assert the need for smoking imagery in a movie to tell a story. The WHO FCTC certainly asserts that the implementation of a comprehensive ban on tobacco advertising, promotion and sponsorship should not prevent legitimate expression. However, the presentation of smoking on screen is rarely realistic, generally showing images more consistent with cigarette advertising than with authentic representations of the dire health consequences of tobacco use. Some people inside and outside the film industry have raised concerns about the impact on free expression of the measures limiting smoking in movies. Most of these concerns are based on distorted accounts of the policies actually proposed to reduce tobacco imagery in films.

Box 2: Tobacco images in films from the United States have worldwide impact

Tobacco imagery emanating from films produced in the United States is extensive outside Canada and the United States. Of the top 20 box office movies worldwide each year between 2005 and 2009, 88% were developed and released by film companies in the United States. In total, those American studio films earned 37% of their theatrical sales revenue (US\$ 15.2 billion) in the United States and the other 63% (US\$ 41.2 billion) in the rest of the world (69). Taking about one third of the United States’ box office receipts each year, the top 20 movies alone generated more than 40% of the rest of the world’s ticket sales. In all, films made in the United States accounted for 23 of the top 25 box office films in the European Union (2009) and for two-thirds of total ticket sales; three-quarters of box office receipts in the Russian Federation and the Commonwealth of Independent States (CIS); 92% of the market share in Canada and the United States (American films occupied 16 of the top 20 slots in French-speaking Québec); nine of the top 10 box office films in Latin American countries; 95% of the market share in Australia; and 80-90% in China, Hong Kong SAR, Malaysia and Singapore. Altogether, it can be estimated that movies made in the United States exposed international audiences to about 220 billion tobacco impressions in theatres alone between 2005 and 2010, an annual average of approximately 37 billion tobacco impressions, about twice the amount that Hollywood delivered on average to theatre audiences in the United States (7).

The largest exceptions are China, which currently limits imported films to no more than one third of available theatre screen time; India, the world’s most prolific film producer, where all imported films have less than 10% of the market share and even Hindi language (“Bollywood”) movies comprise just 20% of national output in more than 20 languages; and Japan, where movies made in the United States occupied just five of the top 20 box office slots in 2009 (69). Public health experts and policy-makers in China and India are addressing smoking in movies produced in national film industries as well as considering the effect of exposure from cross-border blockbusters viewed on pre-recorded disks, via satellite or on the Internet.

2. Protecting young people from smoking in movies: policy options

On-screen smoking benefits the tobacco industry and increases youth smoking initiation. Therefore, as outlined in the WHO FCTC, measures to limit movie smoking have to form part of any comprehensive tobacco control strategy.

Even without the compelling evidence that smoking in films has been a mainstay of tobacco marketing efforts [8, 64], this medium's tremendous reach compels development of measures to substantially and permanently reduce adolescents' exposure to tobacco in film. With bans on tobacco sponsorship of sports and music events in an increasing number of countries, film remains one of the last media in which adolescents can be exposed to smoking imagery without restrictions. Tobacco market leaders [70] benefit the most from any tobacco imagery on film, branded or not. Hamish Maxwell, the then-president of Philip Morris International and later CEO of Philip Morris Companies (forerunner of Altria), recognized this fact in 1983. The important thing, he said, was to "continue to exploit new opportunities to get cigarettes on screen" in order to keep smoking socially acceptable [71].

Policy-makers must also take into account the rapid evolution of media and the emergence of new platforms in order to provide "future proof" solutions. In 2000, 7% of the global population used the Internet; in 2010, 27% used it, and one in four had video-capable broadband service. In 2000, 12% of the global population were mobile phone subscribers; by 2010, 69% were subscribers, and Internet access via mobile phone was fast expanding [72]. The number of movie screens worldwide remained constant between 2005 and 2010, while a quarter was upgraded for lower cost digital distribution of films [14]. At the same time, new multiplex theatres attracted larger audiences in such countries as China and India. Meanwhile, worldwide, falling prices and wider choices (including movie channels and the ability to watch films on mobile devices) were accelerating the spread of newer technologies such as satellite television, as well as the means to view movies via broadband Internet.

2.1 SMOKE-FREE MOVIES AND THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL

The WHO Framework Convention on Tobacco Control came into effect on 27 February 2005. By June 2011, there were over 170 Parties to the Treaty [2]. Article 13 of the WHO FCTC obliges Parties to enact comprehensive bans on tobacco advertising, promotion and sponsorship within five years of ratification. Article 13 also calls specifically for a ban on cross-border advertising, enabling countries that have enacted national restrictions on advertising and promotion to prevent the entry of banned advertising and promotion into their territories. In November 2008, the Conference of the Parties to the WHO FCTC at its third session unanimously adopted the guidelines for implementation of Article 13 [3].

According to the definitions in Article 1 of the WHO FCTC, a comprehensive ban on all tobacco advertising, promotion and sponsorship applies to all forms of commercial communication, recommendation or action and all forms of contribution to any event, activity or individual with the aim, effect or likely effect of promoting a tobacco product or tobacco use either directly or indirectly. This definition would imply that various forms of smoking imagery in movies would be included as part of the comprehensive ban called for by the WHO FCTC. In addition, the Article 13 guidelines specifically recommend that the comprehensive ban should cover traditional media (print, television and radio) and all media platforms, including the Internet, mobile phones and other new technologies as well as films.

Furthermore paragraph (4)(e) of Article 13 states that a Party that is not in a position to undertake a comprehensive ban due to its constitution or constitutional principles should "restrict tobacco advertising, promotion and sponsorship on radio, television, print media and, as appropriate, other media ..." (2). This would imply that the film media are included in this provision.

Finally, smoking in movies can also be considered under the provisions of paragraph (4)(a) of Article 13 that prohibits advertising, sponsorship and promotion "by any means that are false, misleading or deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions ..." (2). For example, of more than 950 films with tobacco imagery in them released by the United States film industry since 1999, very few included characters suffering from a tobacco-related disease. The exceptions are rare, such as "Constantine" (Time Warner, 2005: R-rated) and "The Constant Gardener" (a joint British/German production, 2005, R-rated), both of which feature smokers with lung cancer. Films occasionally feature one character warning another about smoking, but these warnings are often ignored or minimized by the smoking character.

The following section further outlines evidence-based measures and recommendations for countries with different media environments and policy contexts. First, the primary objectives and core principles for recommendations are presented.

2.2 PRIMARY OBJECTIVE AND CORE POLICY PRINCIPLES

When developing policy, both national and global perspectives should be considered. Well-designed, evidence-based public health policy will improve population health both nationally and globally. The primary objective of actions to reduce smoking imagery in the movies is: "To substantially and permanently reduce children's and adolescents' exposure to tobacco imagery in movies."

Only options that meet this objective would then be evaluated for political feasibility, legality, sustainability and cost. There are two principles that guide such evaluation.

- **Principle 1: Seek "upstream" solutions**

Policy should motivate change in the film industry's behaviour so as to reduce harmful content at the source ("upstream") instead of burdening the adolescents in the audience and their parents with taking some sort of protective measures ("downstream"). Films with smoking imagery are causally associated with smoking initiation, and therefore industries that profit from marketing these health risks should be responsible for making them safe.

- **Principle 2: Leverage national action for global benefit**

Policies in one country can protect young people elsewhere. If tobacco imagery in youth-rated movies is greatly reduced in films made in the United States, it will reduce children's and adolescents' exposure in the many other countries where Hollywood movies are popular. The same is true for France, India, the United Kingdom, and any other country with a film industry that has substantial exports. If countries that are markets for Hollywood exports include smoking in their ratings regimes, make films with smoking ineligible for public subsidy or develop other policies that impact the United States film industry's production and distribution, these countries create incentives for Hollywood and other filmmakers to alter tobacco imagery practices as a global public good. Certainly, large countries such as China and India can also set important global precedents. In addition, a global approach increases the leverage of countries whose film markets are not large enough to directly influence multinational corporate behaviour.

2.3 RECOMMENDED MEASURES

While Article 13 clearly identifies most depictions of smoking in movies as a means of advertising and promoting tobacco, its guidelines state that a comprehensive ban on tobacco advertising, promotion and sponsorship need not interfere with legitimate types of expression, including journalistic, artistic or academic expression. In order to ensure that legitimate forms of expression are not tainted by the influence of tobacco industry interests, while at the same time ensuring that youth are adequately protected from the harmful influence of smoking in entertainment media, Article 13 guidelines recommend that:

Parties should take particular measures concerning the depiction of tobacco in entertainment media products, including requiring certification that no benefits have been received for any tobacco depictions, prohibiting the use of identifiable tobacco brands or imagery, requiring anti-tobacco advertisements and implementing a ratings or classification system that takes tobacco depictions into account. (3)

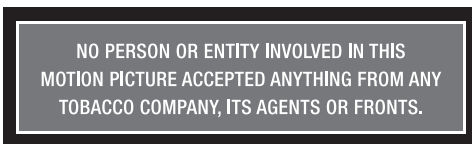
Certify no payoffs

Article 13(4)(d): “[R]equires ... the disclosure ... of expenditures by the tobacco industry on advertising, promotion and sponsorship not yet prohibited” (2). In order to ensure that tobacco companies are not marketing their products through product placement in movies, Article 13 guidelines also recommend that Parties should:

[i]mplement a mechanism requiring that when an [entertainment media product depicts tobacco products, use or imagery of any type, the responsible executives at each company involved in the production, distribution or presentation of that entertainment media product certify that no money, gifts, free publicity, interest-free loans, tobacco products, public relations assistance or anything else of any value has been given in exchange for the depiction. (3)

Films with tobacco use should include a certificate in the closing credits declaring that no persons involved with the production of the movie received anything of value (cash, free cigarettes or other gifts, free publicity, interest-free loans or any other consideration) from anyone in exchange for using or displaying tobacco products in the film. Figure 3 shows a minimalist example of a notice that may appear in the final credits of a film.

Figure 2: Final film credit notice about tobacco payoffs



Certification should require a sworn affidavit on public file from the responsible executive at every company with production and distribution credits for the film. This certification should be backed up by appropriately transparent internal procedures within the companies to assure compliance. Under penalty of perjury or fraud, it would encourage executives to keep productions free of tobacco industry influence. Certification would help discourage tobacco influence through covert, transnational, tobacco-related investments or credit facilities for film productions. Because it is a legal instrument, the actual certification, which would be longer and more technical than the

notice required to be shown on screen, must be drawn up with expert legal advice¹⁵. Because side deals by contractors, employees and even actors are difficult to ascertain, eliminating tobacco imagery entirely from films may be the surest way to reduce the certifying companies' legal exposure altogether.

A procedure is needed for deciding if the film includes tobacco imagery and needs to be certified. This qualification procedure should be categorical in that any film that refers to, shows or implies tobacco use, a tobacco product or a tobacco brand needs to be certified. Many countries already have a voluntary or official regime for registering films, rating them and approving them before local distribution. They may offer grants, tax credits, spending rebates, development funding or distribution support to national and international film productions, as discussed in Section 1.3. These measures should be amended to make film and television projects with tobacco imagery or reference ineligible for public subsidy. Countries may also have specific tax or trade policies related to the distribution of imported films. Such existing mechanisms should be amended to require certification that no payoffs have been accepted for films with tobacco images.

Where imported films dominate a country's film market, it should be a straightforward procedure to require certification of no payoffs as a condition for a film's exhibition licence. The country is simply requiring that the distributor ensure that the film does not violate the national policy against paid tobacco advertising. Also, anti-placement language should be inclusive so as to cover any kind of "consideration", including gifts, barter (including advertisement bartering), discounted services (such as production services), promotional arrangements, house rents and car leases, as well as cash or credit extended to an individual or company.

Stop identifying tobacco brands

The depiction of tobacco brand names in movies is clearly a form of tobacco advertising and promotion according to the definitions outlined in Article 1 the WHO FCTC. In addition, the Article 13 guidelines recommend that a comprehensive ban on tobacco advertising, promotion and sponsorship should cover advertising and promotion of tobacco brand names. It also recommends that these comprehensive bans extend to such media platforms as films.

While most advertising is fleeting, tobacco brands shown on screen are viewed repeatedly on a growing number of media platforms. Their lifetime is measured in decades. Thus, there should be no tobacco brand identification, tobacco "trade dress" or the mimicry of "trade dress"¹⁶, or tobacco brand imagery (such as billboards) in any movie scene. Under pressure from states' Attorneys General, United States-based tobacco companies have written to Hollywood film studios to protest against the use of their tobacco trademarks, after the fact, but have not pursued any legal remedies for this use of their trademarked material. The studios, in turn, have publicly stated that they never request permission to use these trademarks. However, a simple, easily enforced rule would be more effective in eliminating hard-to-detect arrangements for global brand exposure in films. A total ban on brand identification on screen would be the most straightforward extension of national restrictions on tobacco branding in all media.

¹⁵ Example of substantive certification language drafted in 2009 by a United States entertainment attorney for the University of California, San Francisco, Center for Tobacco Control Research and Education: "No person or entity participating in or in any way associated with the development, production, financing, distribution, exhibition, marketing or any other exploitation of this motion picture in any medium [in the United States][anywhere in the world] has received anything of value (including money, merchandise, advertising, publicity or any other opportunity, consideration or incentive of whatever nature), nor entered into any agreement, understanding or other arrangement with respect to any of the foregoing, in connection with any use, depiction or appearance of or reference to any products containing tobacco in this [or any other] motion picture or the marketing or exploitation thereof."

¹⁶ Trade dress, a form of intellectual property, refers to the visual characteristics of a product identifiable by the consumer. Movies and television series produced in the United States have used prop tobacco packages that mimic the trade dress of best-selling tobacco products, with altered lettering.

Require strong anti-smoking advertisements

Article 13(4)(b) of the WHO FCTC “[R]equire[s] that health or other appropriate warnings or messages accompany all tobacco advertising and, as appropriate, promotion and sponsorship ...” (2). The recommended approach according to Article 13 guidelines is to “require the display of prescribed anti-tobacco advertisements at the beginning of any entertainment media product that depicts tobacco products, use or images” (3).

Classroom (34) and in-theatre (73-75) experiments show that an anti-tobacco advertisement before a film that includes tobacco imagery helps inoculate both younger and older adolescents against the promotional effects of such imagery in the film. A strong anti-smoking advertisement (not one produced or influenced by a tobacco company) should run before a film with any tobacco presence and in any distribution channel, regardless of its rating. It should be culturally appropriate and targeted to specific audiences (76). Such spots are important because, even if tobacco images are cleared from youth-rated films, adolescents may be exposed to adult-rated films through new digital technology. In the United States, for example, adolescents get around half of their tobacco exposure from R-rated films (25); adolescents in countries whose film classification regimes commonly make films R-rated in the United States accessible to young people receive substantially more exposure. Because all media are converging on digital technology and because it is increasingly likely that adolescents in many countries can also access this technology, effective anti-tobacco spots can be added to videos and other distribution channels, including cable and satellite, video-on-demand and Internet downloads after distribution.

The World Lung Foundation web site (<http://www.worldlungfoundation.org/>) hosts a series of anti-tobacco advertisements from various countries (77) that have been selected for their potential applicability around the world, having been shown to be effective in a number of countries. The American Legacy Foundation’s “truth” campaign spots (<http://www.thetruth.com/archive/>) and television advertisements developed by the State of California, the United States (<http://www.tobaccofreeca.com/ads.html>), have also been demonstrated to be effective in discouraging youth from smoking (78-80).

There are significant considerations for governance in this kind of policy intervention. National rules are needed to determine how advertisements will be developed and selected for use, who will vet and pay for them and how many will be needed to avoid audience fatigue. In addition, rules for distribution and monitoring procedures will be needed.

Because this policy may be the least disturbing to the status quo and may provide the film industry with an opportunity to demonstrate corporate social responsibility, anti-tobacco advertisements may be the easiest policy to promote. While research shows that anti-tobacco spots do not lower audience opinion of a given movie, their presence may be inconvenient enough that they may contribute to an eventual reduction in the number of new movies with smoking imagery.

Require adult ratings for movies with tobacco imagery

Given that there is a dose-response relationship between exposure to on-screen smoking and youth tobacco initiation, a key goal should be to reduce youths’ level of exposure (the dose) to on-screen smoking. Most youth exposure to on-screen smoking comes from smoking incidents in youth-rated films. Because fewer children and adolescents view adult-rated films, official ratings for age-appropriateness would be an effective method to reduce adolescent exposure to tobacco use without interfering with movie content. Any future movie with tobacco imagery should be given an adult

rating, with the possible exception of movies that unambiguously depict the dangerous consequences of tobacco use or portray smoking by an actual historical figure who smoked. Older films should not be re-rated.

The age of majority may vary from country to country, but in general, an “adult” rating means that individuals younger than that age (18 years of age in many countries) are not allowed to see the movie or that the viewer under the age of majority must be accompanied by a parent or adult guardian. In a number of other countries, an “18” or “R-18” rating would correspond directly with their age of majority. In the United States, the “R” rating (individuals under 17 years of age are not admitted without a parent or adult guardian) comes closest to the age of majority. The next age level identified by specific ratings below these “adult” ratings typically sets a minimum age of between 13 and 15 years, e.g. PG-13 in the United States [81]. Without “adult” rating restrictions for movies with tobacco imagery, however, tobacco exposure would be allowed or even effectively endorsed in films targeted at adolescents aged 12-17, those at highest risk for smoking initiation (indeed, in the United States, the majority of youth exposure to on-screen smoking comes from PG-13 movies). Therefore, an appropriate adult rating (such as R-18) would be recommended for films that include tobacco imagery.

Age classification systems are generally developed in accordance with national guarantees of freedom of expression. Therefore, including tobacco imagery in the existing rating framework should raise no rights or censorship issues.

A rating scheme does not need to be 100% effective in reducing youth exposure to make a difference. Insofar as producers leave tobacco imagery out of films in order to obtain a youth rating in their domestic markets, these films will reduce overall exposure of youth to on-screen tobacco use in films released globally by major distributors.

Make media productions with smoking ineligible for public subsidy

Public subsidy of media productions known to promote youth smoking initiation is counter to WHO FCTC Article 13 and its guidelines. Public support for and policies favouring media producers, whether the rationale is cultural conservation or commercial competition, should be harmonized with the fundamental public health imperative to protect populations from tobacco promotion and with Article 13 of the WHO FCTC. By definition, subsidy programmes transfer public assets to a private interest for a public good and, therefore, the statutes and regulations governing subsidy of media productions commonly include or exclude certain types of media production and content. These programme specifications should be amended so that any media production representing or referencing tobacco use, or depicting a tobacco product, non-pharmaceutical nicotine device, or tobacco brand names, trademarks, marketing collateral or paraphernalia, is ineligible for any form of public benefit for project development, production, marketing or distribution, including grants, loans, investments, spending rebates, tax credits or other favourable tax or trade treatment.

2.4 STRATEGIES FOR OLDER MOVIES

Films may be popular for decades after their initial release and, thus, there should be some consideration of at least adding warning labels and anti-tobacco messages to DVDs and videos of older films. Most films date quickly and older films represent a small fraction of the youth market; thus it is not practical to re-rate older films.

The same factors that can prevent a country's age classification from shaping exposure (films viewed mostly on video, widespread piracy, lack of ratings enforcement) also make it impractical to attempt to ban imported films with tobacco imagery. Before they are distributed, however, imported films should include a strong anti-tobacco advertisement before the start of the film and a no-pay-off notice in the final credits, backed by an affidavit from the original production companies and the distributors. They should also receive an "adult" rating.

2.5 MEASURES WITH POTENTIALLY LIMITED EFFECT

Blocking out tobacco images

Pixelization is a video- and image-editing technique where part of an image is blurred by displaying it at a markedly lower resolution. It is primarily a censorship method. However, even though the image of a cigarette can be blurred during a scene, it is often an imperfect solution since viewers can typically infer that the character is indeed smoking. In addition, unlike anti-tobacco spots shown before the film, pixelization does not engage the audience in critical thinking about tobacco imagery in the film. Although there are no studies yet to confirm this, logical reasoning leads to the conclusion that pixelization may actually attract attention to this imagery. The paradoxical result of blocking tobacco images (as opposed to ensuring that they simply do not appear) is that smoking may become more intriguing to adolescents as a model of rebellious behaviour.

If an aftermarket policy solution is needed, strong and proven effective anti-tobacco spots are much preferred to pixelization, blurring of films or embedding formulaic health warnings or symbols in a film.

2.6 MEASURES NOT RECOMMENDED

Partial or subjective measures

In order to be effective, policies must be clear, easily interpreted and transparently applied. For example, a rule that grants an exception for an actual historical figure who actually smoked (e.g. Winston Churchill) can be effectively applied. A general "historical character" exception cannot be. Labels such as "gratuitous smoking", "pervasive smoking", "glamorized smoking", "positive images of smoking", "imagery that condones smoking", "editorially justified smoking", "historically appropriate smoking" and "justified smoking" are examples of criteria that are impossible to define. Such vague terms mean that filmmakers and ratings authorities will not know what is and is not consistent with the policies; this approach leaves much to conjecture, lacks transparency and results in inconsistent implementation.

Equally problematic would be general requirements that rating bodies merely "consider" smoking in films without also providing specific guidelines. Experience in the United States has shown that such ambiguous policies have no practical effect on youth exposure to smoking on screen (82). In May 2007, the MPAA said that it would consider adding descriptors such as "pervasive smoking" or "glamorized smoking" to some ratings, without a "mitigating context" (83, 84)¹⁷. Such content descriptors fail to convey the harmful effect of the film's smoking imagery. It is the cumulative exposure to smoking in films – not the amount of smoking in a particular film – that best predicts the effect on adolescents. Thus, subjective tobacco rating standards, including non-categorical exceptions, are not recommended.

¹⁷ The published Classification and rating rules (effective as of 1 January 2010) of the so-called Classification and Rating Administration jointly governed by the (private) MPAA and National Association of Theatre Owners make no reference to tobacco, smoking or cigarettes.

Box 3. Early WHO recognition of the problem of smoking in movies: World No Tobacco Day 2003

The World Health Organization has recognized smoking in movies as an important issue worthy of a serious response. In 2003, WHO chose the theme “Tobacco Free Film, Tobacco Free Fashion” for its annual commemoration of World No Tobacco Day (WNTD). The Organization called on the entertainment industry, in particular the industries of film and fashion, to stop promoting a product that kills every second regular user. It was supported by the Smoke Free Movies project (see under United States response, below) and, in particular, Hollywood and Bollywood were invited to join the multinational response to effectively restrict smoking imagery in movies. For more information on this past event, see:

<http://www.who.int/tobacco/communications/events/wntd/2003/en/index.html>

3. Country responses

By 2011, several countries had initiated tangible actions to reduce tobacco imagery in movies, either in the theatre environment or in ancillary exposure opportunities for DVD, Internet, cable and satellite. Actions in these countries will be reported in more depth in this section without evaluating how well they conform to the recommendations of the guidelines for Article 13 of the WHO FCTC or of this report.

Interest in this area of tobacco control is rapidly increasing at both the national and sub-national level. In many cases, the issue has been brought forward by civil society organizations, such as NGOs, who are recognizing this important gap in tobacco control efforts, and have started advocating for increased action. In other cases, governments are starting to examine the issue more closely.

- In Canada, since 2005, national and province-level health NGOs in Ontario (Toronto), British Columbia (Vancouver), and Quebec (Montreal), often with participation by local health departments, have allied to survey film content, evaluate film ratings, document public subsidies for movies with smoking, and endorse best practices (26). They have forwarded their endorsement to policy-makers in other parts of government concerned with film classification and tax policy, and embarked on public opinion polling and public education campaigns in support of policy change (85).
- In China, after several film content surveys were publicized by a Beijing-centred NGO (86), a 2011 central government directive banned certain tobacco imagery in films and television programmes and strongly urged film and television producers throughout the country to eliminate or minimize tobacco imagery.
- In India, as of July 2011, the Ministry of Health and Family Welfare is in ongoing discussions with the Ministry of Information and Broadcasting about the treatment of tobacco imagery in future films, amid a broader discussion of revisions to the overall film classification system.
- In Kenya, the Kenya Film Classification Board is the public regulator of films destined for public exhibition, distribution and broadcasting. The Board considers, among other things, the degree and frequency of use of tobacco products to determine the age suitability of films, although the weight of these criteria in the final rating of the film is not clear. As part of the enforcement of Kenya’s 2007 comprehensive ban on tobacco advertising, promotion and sponsorship of tobacco products, the Board explicitly discourages the use of tobacco and appearance of tobacco brands in Kenyan entertainment products.

- On World No Tobacco Day, 2011, Malaysia's Minister of Health urged filmmakers to avoid tobacco depictions to protect the country's young people (87).
- In Nigeria, a regional leader in video production, the Senate passed legislation in 2011 banning any depiction of tobacco products in any medium including "films [and] brand placements" (88).
- In 2009, as part of a comprehensive ban on tobacco advertising, promotion and sponsorship, the Republic of South Africa banned the depiction of or reference to a tobacco product or brand element in exchange for payment in cash or otherwise in all entertainment media. Film or video transmission outside South Africa and not targeted primarily at people living in the country are exempted.
- In the United Kingdom in 2009, the council for Liverpool, which has the highest lung cancer rate in the country, started considering a move to override national film ratings and adult-rate future movies with smoking exhibited there. In 2010, the council decided to defer action until the United Kingdom-specific evidence linking on-screen smoking to youth smoking became available, something that occurred in July 2011 (45). Partially in response to Liverpool's actions, in early 2011, the Government convened a national consultation on the problem of on-screen smoking.
- In the United States, in 2009, with the support of leading national health NGOs, the Centers for Disease Control and Prevention announced that it would monitor adolescent exposure to on-screen tobacco imagery (89) and published the results of this monitoring in 2010 and 2011 in its widely read *Morbidity and Mortality Weekly Report* (7, 89). The U.S. Department of Health & Human Services made reduced youth exposure in motion pictures a priority in the nation's 2010 official anti-tobacco strategy (90) and, in 2011, the CDC endorsed the four policy solutions (including an adult content "R" rating for on-screen smoking) outlined by WHO in this report. In addition, the CDC called for state film subsidy programmes to be harmonized with their public health programmes by making films with tobacco ineligible for state subsidies (7).

3.1 CHINA

China, the country with the largest number of smokers in the world, has been taking action to limit the amount of smoking on-screen, including in movies and in television productions. In 2006, the State Administration of Radio, Film and Television (SARFT) issued the Rule on Movie Screenplay (Abstract) Registration and Movie Film Administration that requires "excessive" scenes with smoking in films to be cut or modified, with SARFT's Film Review Committee having authorization to issue a permit or require modification of the reviewed movies (91). In 2008, SARFT reaffirmed that requirement in its Notice on Restating the Movie Review Standards in which the 2006 Rule is restated. Standards were reviewed again and, in 2009, SARFT issued the Notice on Strictly Controlling Smoking Scenes in Television Drama, which specifically required reductions in the length of smoking scenes and bans smoking scenes with minors in them, along with any type of tobacco advertising on television. Teleplays that included too many smoking scenes could not be nominated to any of SARFT "excellent assessment activities".

In 2011, SARFT issued the Notice on Strictly Controlling Smoking Scenes in Movies and Television Drama, which replaced the 2009 notice and strengthened measures to reduce on-screen smoking. The notice recognized the fact that widespread smoking scenes have a negative impact on the public, especially minors, and that they are out of line with the government objective of reducing tobacco use. The notice requires producers to minimize plot lines and scenes involving tobacco and

show smoking only when necessary for artistic purposes or character development. Other specific measures for movies and television drama included in the notice are the following:

- tobacco brand identity, related content and disguised tobacco advertisements are banned;
- smoking scenes shall not appear in scenes of public buildings or other places where smoking is banned or no-smoking signs are displayed;
- minors shall not be shown smoking or buying cigarettes nor shall they be present while others smoke;
- the number and length of smoking scenes in television dramas and movies should be limited;
- SARFT and its local counterparts will consider the number of smoking scenes before the movie or television drama can be approved for public showing.

The notice further advises that movie and television producers should try to find other forms of artistic expression that do not involve smoking and should edit remaining smoking scenes to be as short and infrequent as possible.

It is required that provincial radio and television administrative departments, China Central Television, and the People's Liberation Army (PLA) General Political Department Propaganda Division Art Office should assume the responsibility for management and supervision, urging producers under their jurisdictions to make smoke-free television dramas and guiding directors and actors not to shoot smoking scenes. Provincial movie review agencies and television drama broadcasting institutions are required to strengthen the review of films and television dramas before their screening and try to cut or reduce smoking scenes appearing in them (92).

Although foreign movies, including Hollywood blockbusters, are shown in China, the 2011 notice does not specifically mention entertainment media imported from other countries. However, foreign movies shown in China are already required to follow Article 23 of the 2006 Rule on Movie Screenplay (Abstract) Registration and Movie Film Administration. This requires that imported movies shall be reviewed according to Chapter 3 of the Rule, so that restrictions on smoking scenes apply to imported movies as well.

It is important to recognize that ongoing activities by the Chinese Association on Tobacco Control (CATC) have helped to bring about these SARFT regulations by bringing public attention to this issue. The Association has strategically made use of data showing the high levels of smoking imagery in Chinese movies and television productions. It has coordinated press conferences and organized celebrities, including film stars, to advocate for regulations to reduce such imagery. In response to CATC's initiatives, many film directors expressed their willingness to take more responsibility by reducing smoking scenes. In 2010, CATC also sent open letters to SARFT to appeal for a smoking ban on screen. Upon release of the 2011 directive, CATC held a press conference to praise the new notice and suggest detailed implementing regulations. The SARFT has announced that it will continue to review the directive with a view to including more specific implementation guidelines.

3.2 INDIA

In 2003, the Government of India enacted a comprehensive tobacco law, the Cigarettes and Other Tobacco Products Regulation Act (COTPA), which includes a ban on tobacco promotion, and direct and indirect advertising of tobacco products (93). Because India's film market is relatively isolated from the pervasive tobacco imagery in United States-produced films compared with most other

countries, WHO and the Ministry of Health and Family Welfare (MoHFW) conducted a thorough study of tobacco and India's indigenous cinema industry in 2003, before the passage of the COTPA. Among the findings was the following (66):

- of the 395 top-grossing films in 1990–2002, 76% depicted tobacco use;
- tobacco incidents attributed to the lead actors grew from 22% (1991) to 54% (2002);
- tobacco branding made up fewer than 3% of tobacco incidents – half of all on-screen displays of brands marketed by the Indian Tobacco Company, British American Tobacco's long-time partner, occurred in 2002, immediately before the national advertising ban and the full entry of Philip Morris International into India's market.

After the COTPA barred tobacco advertisements in other media in 2004, a second study documented changes in Bollywood's tobacco imagery (94). This research found the following:

- of 110 Hindi-language films produced in 2004 and 2005, 89% depicted tobacco use;
- smoking incidents were attributed to lead actors in 76% of films;
- of the 2004-2005 films depicting tobacco use (41% of the total film sample), 46% included tobacco branding; 85% of films with tobacco brands displayed either BAT/ITC (58%) or PMI (27%) trademarks; and PMI's Marlboro brand dominated display in large-budget films.

The "before" study demonstrated that popular movies from north and south India paralleled the tobacco content of films produced in the United States in key aspects, including their influence on youth attitudes towards smoking. The "after" study found that tobacco imagery, including brand display, had markedly increased in the wake of tobacco advertising bans in other media.

In 2005, the COTPA's rules were refined to meet the challenge of smoking in the movies. When the advertising, promotion and sponsorship ban went into force, tobacco companies developed new marketing strategies to circumvent the law. Violations of the tobacco-advertising ban brought to the attention of the MoHFW included an increase in smoking and tobacco brand display in films. Consequently, on 31 May 2005, India amended its COTPA rules to clarify requirements and ensure full compliance. Amendments included a ban on all depictions of tobacco products and their use in films or on television.

- No individual person or character appearing in films for the cinema or television programmes shall display tobacco products or their use. Where, however, films and television programmes, which have been produced prior to this notification, contain scenes in them depicting smoking situations and the use of other forms of tobacco, it shall be mandatory to place a health warning as a prominent scroll at the bottom of the cinema or television screen in a legible black font on a white background. The text of the warning shall be "Smoking causes cancer" or "Smoking kills" for smoking forms of tobacco use, and "Tobacco causes cancer" or "Tobacco kills" for chewing and other forms of tobacco. The health warning shall be in the same language/s as that used in the film or television programme.
- Wherever brand names or logos of tobacco products form a part of the pictures to be printed in any form of print, outdoor media or footage to be aired through any form of electronic media, it shall be mandatory for the media to crop or mask the brand name and logos of the tobacco products to ensure that they are not visible (95).

These rules were to be implemented by the Ministry of Information and Broadcasting (MoIB), which maintained that there was need for flexibility and that the entertainment industry's freedom of expression should not be infringed. It was suggested that where there was creative justification for depicting tobacco, India's Central Board of Film Certification should grant an "A" (adult) film-rating certificate, which denies admission to any moviegoer under the age of 18 years. In October 2006, after numerous inter-ministerial consultations, the MoHFW relaxed provisions of the blanket ban to allow depictions of tobacco in some circumstances, with specific warnings.

- Warnings reading "Smoking kills", "Smoking causes cancer", "Tobacco kills" or "Tobacco causes cancer" should scroll under the depictions of tobacco use.
- Anti-tobacco spots, a minimum of 30 seconds long, should be screened at the beginning, middle and end of films and television programmes, both domestic and imported, that were produced before publication of the revised rules, and that are shown in theatres or aired on television with the exception of:
 - domestic and imported documentaries and public service spots displaying tobacco use shown in theatres or aired on television if they clearly and unambiguously reflect the dangers and dire consequences of tobacco;
 - live television coverage of news, current affairs interviews, public meetings, sports, cultural events, etc., in which there is a "purely incidental and completely unintentional" image of tobacco use.
- Where there is a creative justification for tobacco imagery or depiction of a real historical character that used tobacco, films and television programmes, domestic or imported, will be given an "A" certification accompanied by:
 - a recorded disclaimer from the actor concerned regarding the harmful effects of tobacco use;
 - an anti-tobacco health scroll, starting 60 seconds before the scene with tobacco and ending 60 seconds after.

The Indian Government's smoke-free movie efforts were challenged in the High Court by a Bollywood film producer and, in February 2008, the two-judge bench of the court produced a split verdict in the case. In January 2009, a High Court judge struck down the rules banning smoking scenes in films. The Government of India still maintains that the Constitution allows reasonable restrictions to promote public health and, in 2009, filed an appeal with the Supreme Court. The Supreme Court suspended the High Court's order. Subsequently, the Government decided to notify the Revised Smoke-free Movies Rules and hold negotiations with the MoIB in order to amend the proposed rules to make them more practical to implement. This negotiation is ongoing as of July 2011, including tobacco warning requirements and the clarification of objective criteria for any proposed exception to the Smoke-Free Movie Rules. This occurs amid broader discussion of revisions to the overall system for classification of films in India. Recent publication of a study finding that the greater the exposure that adolescents in India have to on-screen smoking, the more likely it is that they will smoke [46], has added urgency to these negotiations.

Indian films are viewed in over one hundred countries worldwide, attracting 25 million Indians working abroad and building a fan base in industrialized countries. Entry into the Indian film market is also a potential growth area for the United States film industry. For these reasons, national interventions in India can have a global impact on reducing youth exposure to tobacco imagery.

3.3 THE UNITED KINGDOM: SUB-NATIONAL AND NATIONAL EXPERIENCE

In 2011, the Government in the United Kingdom started considering measures to reduce tobacco imagery in films after initiatives on this issue began at the sub-national level in Liverpool.

Under the terms of the United Kingdom's Tobacco Advertising and Promotion Act, tobacco advertising in the print media, on billboards and in direct mail ended in 2003, and sponsorship of sport ended in July 2005. However, movies remain an important channel through which young people in the United Kingdom are still regularly exposed to pro-tobacco imagery.

The Centre for Tobacco Control Studies at the University of Nottingham estimated the number of tobacco impressions delivered by films in the United Kingdom accessible to young people. Merging historical, publicly available box office data and tobacco incidence data for films originating in India, the United Kingdom and the United States and released widely in theatres in the United Kingdom, researchers found that films rated for young people (below an "18" rating) delivered nearly 90% of tobacco impressions in the United Kingdom (27). Another study of the 15 most commercially successful films in the United Kingdom each year from 1989 to 2008 found tobacco in 70% of all films, 56% of which were rated as suitable for viewing by children aged younger than 15, and 92% for children aged younger than 18. Brand appearances were nearly twice as likely to occur in films originating wholly or in part from the United Kingdom (UK films). Specific brands appeared in 9% of all films and films rated as "15" had the largest proportion of brand display (96).

In 2010, the Government published a tobacco control strategy for England, a key objective of which was to "stop the inflow of young people recruited as smokers" (97). As part of this strategy, the Government recommended that smoking "must not be featured in programmes made primarily for children (defined as <15 years of age) unless there is strong editorial justification" and smoking "must not be condoned, encouraged or glamourized in other programmes likely to be widely seen or heard by under-18s unless there is editorial justification." However, only calling for restrictions on films that "feature" smoking that is "encouraged or glamourized" unless there is "strong editorial justification" still allows for smoking in virtually any film, because such terms are not clearly defined.

In 2011, the Government published a new tobacco control strategy in which they commit to "continue to work to reduce the depiction of smoking in the media, including through bringing together media regulators and the entertainment industry to consider what more can be done." (98)

Films in the United Kingdom are classified by the British Board of Film Classification (BBFC), an independent, nongovernmental body that was set up by the film industry in 1912 to bring a degree of uniformity to film ratings across the country. Significantly, the BBFC ratings are only advisory to the local councils that license films for exhibition. Statutory powers on film remain with the local councils, which may overrule any BBFC decision (99). While local councils have generally followed the BBFC advice, there are many examples where local authorities have not. As of June 2011, BBFC criteria for movies to receive an "18" rating (similar to an "R" rating in the United States) are as follows:

where material or treatment appears to the BBFC to risk harm to individuals or, through their behaviour, to society – for example, any detailed portrayal of violent or dangerous acts, or of illegal drug use, which may cause harm to public health or morals. (100)

Concerned about the scientific evidence linking on-screen smoking to youth smoking initiation, and believing that the BBFC should be applying its existing classification rules to include smoking, a group of public health and community groups in Liverpool, collectively called SmokeFree Liverpool

(101), has taken a leading role in addressing this issue. The coalition, comprising 10 health-care agencies, public bodies, NGOs and private philanthropic organizations in northwest England, is advocating that local authorities exercise their licensing authority to apply an "18" rating to films with smoking shown in Liverpool. SmokeFree Liverpool asserts that existing BBFC criteria already justify this rating for movies that contain smoking.

The strategy developed by public health experts in the SmokeFree Liverpool network is to document the scope of the challenge, build national and international alliances and mobilize young people to press for ratings change within the film industry in the United Kingdom, both to protect young people and to influence film industry practices elsewhere. Early in the process, SmokeFree Liverpool and its local partners embarked on a series of briefings and consultations with regional and national partners to share information, and gather endorsements and plan strategy. Liverpool sponsored the first international conference on smoke-free movies in February 2008, welcoming representatives from the United Kingdom, other European countries, and the United States to discuss the role of youth movements (such as Liverpool's D-MYST and New York's Reality Check) in community education and advocacy, the place of smoke-free movies on national prevention agendas, and the global dimensions of smoke-free movie policy solutions.

After the BBFC turned down a request from D-MYST youth that new films with tobacco imagery be given an "18" rating, SmokeFree Liverpool began exploring the feasibility of an "18" rating in their own jurisdiction. Through these actions, SmokeFree Liverpool aims both to protect their communities and to influence the practices of film producers and distributors (the majority of which in the United Kingdom are controlled by United States-based companies) by exercising their right to override the national ratings. As a major export country for films made in the United States, these actions in the United Kingdom would have important implications for United States film distributors and would likely create an incentive for more youth-marketed movies to be smoke free.

SmokeFree Liverpool recognized the importance of communicating clearly to the public and stakeholders the rationale and benefits of the policy, countering any disinformation that arises and preparing a broad base of public understanding and support. This strategy has gained momentum since an announcement in July 2008 by the British Medical Association recommending that the BBFC take smoking "into consideration" when classifying films (102). Endorsement from the BMA immediately heightened public awareness of the need to act on smoking imagery in movies at the local level.

Accordingly, SmokeFree Liverpool implemented a communications plan to advocate for the initiative. The elements of this strategy include:

- raising awareness of the issue among the general public through media relations activity, paid-for outdoor advertising and road shows;
- demonstrating support for the measures by canvassing local people and collecting signatures for presentation to the BBFC and the local council;
- supporting activities of Liverpool's tobacco control youth group, D-MYST, who will rally their peers and speak out on the tobacco industry's manipulation of young people;
- producing fact sheets and paid-for open letters (national and local) calling on the BBFC to give an "18" rating to new films with smoking, and warning of possible local council action; and
- preparing the case for presentation to the Liverpool City Council if the BBFC (national) approach is unsuccessful.

The case for implementing a local adult rating for films with smoking was prepared and presented to Liverpool city council in mid-2009. The council subsequently undertook a three-month consultation on this proposal but declined to act during a full meeting at the end of 2009, instead asking for more research directly relevant to England and Liverpool. In mid-summer 2011, the Government convened a consultation on on-screen smoking and policy remedies.

3.4 THE UNITED STATES

The motion picture and cigarette industries in the United States grew rapidly after the First World War. By the end of the 1920s, studios brokered cigarette endorsement deals for movie stars under contract to them in return for national advertising campaigns paid for by the tobacco companies. The tobacco industry shifted spending to television in the 1950s, but after the United States Government banned broadcast advertising of tobacco products in 1970, systematic film placement of tobacco imagery intensified.

In 1989, reports of product placement in Hollywood films spurred the United States Congress to demand more detail on advertising expenditures from the tobacco companies. These data were to be used to improve United States Federal Trade Commission surveillance of cigarette marketing expenditures. However, the tobacco companies denied they bought product placement in films, and some companies failed to report ongoing payments to Hollywood agents as recently as the mid-1990s.

In response, health advocates implemented campaigns designed to educate film industry “creatives” (writers, directors, actors) about tobacco imagery’s harmful effect, but these actions were essentially ineffective. In 1998, the states’ Attorneys General and the five large United States-based tobacco companies entered into the Master Settlement Agreement (MSA). Among other things, this legal agreement prohibited the participating domestic cigarette companies from tobacco product placement in entertainment media. Because the MSA was an agreement between United States-based domestic tobacco companies and the states’ Attorneys General, it did not cover overseas tobacco subsidiaries (65).

In 2002, the Smoke Free Movies project, based at the University of California, San Francisco’s Center for Tobacco Control Research and Education (a WHO Collaborating Centre), set up a web site (<http://www.smokefreemovies.ucsf.edu>) and published a series of paid advertisements in entertainment trade journals. These advertisements suggested that smoking persisted in youth-rated films for one of two reasons (quoted verbatim from the paid ads): “Either people in Hollywood are still on the take, in which case they’re corrupt ... or they’re doing Big Tobacco’s dirty work for free – in which case they’re stupid.” (103) Smoke Free Movies and its national NGO allies also developed and promoted a set of four evidence-based policy solutions intended to substantially and permanently reduce teenagers’ exposure to on-screen tobacco imagery, without intruding on film content. These have provided the basis for the policy options described in Section 2.3 above (104).

The major motion picture studios, through the MPAA, at first took none of the steps advocated by American health experts and organizations. However, NGO tracking of individual studios’ records and the steady accumulation of research evidence on the exposure of adolescents to smoking in the movies stimulated congressional hearings. In addition, Attorneys General from more than thirty states wrote letters to the companies that owned the major studios, stating that they were knowingly harming children by releasing films with tobacco imagery. In Los Angeles, where the Hollywood studios themselves are located, the County Department of Health Services was the first public health agency in the United States to endorse the four policy goals, beginning in 2002. Since then, its

publicity events and media briefings have regularly attracted international attention. Two congressional hearings (2004 and 2007) advanced the issue, leading three major studios to publish corporate policies for reducing smoking depiction in future youth-rated movies. The Commissioner of Health of the State of New York, where many of the major studios' parent companies are based, published full-page advertisements in *The New York Times* and other news media calling for action by the studio heads (105). Other state and local public health officials continue to join this campaign. In 2011, for example, the Chair of the legislative-mandated oversight Board for Tobacco Control in the State of California joined the Director of Los Angeles' Department of Public Health in calling for films with smoking to be disqualified for state movie production subsidies (106).

On the national level, the Institute of Medicine of the National Academies of Science (107), the National Cancer Institute (1) and the Centers for Disease Control and Prevention (7, 89, 108–111) have all noted the need for the film industry to change its practices.

In 2007, the MPAA announced that it would "consider" smoking in its ratings (82). In practice, however, the MPAA has not elevated film ratings for smoking but merely noted smoking in the rating labels attached to "independent" films given limited release, sparing most youth-rated films with smoking released by the MPAA's own member studios (83). In 2008, MPAA-member film studios agreed to deploy anti-tobacco spots, but only on youth-rated DVDs of movies with smoking distributed in the United States and, for some companies, in Canada.

In the United States, the public health community has mobilized health and medical professional organizations, youth groups, policy-makers, law enforcement, corporate investors, and health agencies at the national, state and municipal level. The aim has been to raise reputational and other costs for continued tobacco depictions in youth-rated films and to promote a consistent set of policy solutions that will reduce media companies' uncertainty about future liability.

The best evidence for the efficacy of this approach is that tobacco incidents in top-grossing, youth-rated movies in the United States have declined steadily and substantially since their peak in 2005. The average number of incidents per youth-rated movie fell from 20 in 2005 to seven in 2010, a 66% reduction; the degree of improvement, however, varied substantially by movie studio. The three companies with published policies designed to reduce smoking in their films (Disney, Time Warner and Comcast's Universal) reduced tobacco incidents per youth-rated (G/PG/PG-13) movie by more than 90%, to an average of fewer than two incidents per movie by 2010. The other companies (Sony, News Corporation's Fox, Viacom's Paramount, and independent film companies considered as a group) had 26–63% reductions and six to 14 tobacco incidents per youth-rated movie in 2010 (7). Published company policies, adopted between 2004 and 2007, provide for review of scripts, story boards, daily footage, rough cuts, editing decisions and the final edited film by managers in each studio with authority for implementing the policies. As of June 2011, none of the studios had blanket policies against including smoking or other tobacco imagery in youth-rated films that they produced or distributed. These results led the Centers for Disease Control and Prevention to conclude:

The fact that some major studios have excluded nearly all tobacco depictions from their youth-rated (G/PG/PG-13) movies shows that it is possible to make classes of motion pictures that do not feature smoking and other tobacco use. Inconsistent performance across the motion picture industry, however, threatens continuing progress toward eliminating youth-rated films as a major stimulus for youth smoking. Consistent with the policies adopted by the three studios demonstrating the greatest progress, modernizing the MPAA's R-rating to include smoking would create a level playing field and ensure that existing progress is not reversed. (7)

Despite this progress, billions of tobacco impressions continue to be delivered to audiences and industry-wide incentives are not yet in place to eliminate the vast majority of smoking imagery from the movies that adolescents see most often. At the same time, the states that have subsidized top-grossing, youth-rated movies with smoking from 2008 to 2010 are spending as much on these films as they spend on tobacco control and prevention. In 2011, the CDC endorsed efforts by state policy-makers “to harmonize their state film subsidy programmes with their tobacco control programmes by limiting eligibility for subsidies to tobacco-free films” (7).

4. Conclusion

4.1 LESSONS LEARNED

Experience shows that whenever tobacco advertising and promotion is restricted in one medium, it migrates to another. Tobacco appearances in films accelerated in the United States while tobacco advertising in other media was being restricted, and in India a similar process occurred after tobacco advertising in other media was prohibited. Because smoking on screen is uniquely vivid and because young people see so many films so often, its promotional effect on smoking initiation is striking. Any country seeking to ban or restrict tobacco advertising and promotion must address the issue of smoking on screen or risk having its public health efforts being severely compromised. The most vulnerable age group (adolescents) should not continue to be exposed to the most powerful promotional channel for smoking imagery available in today’s globalized economy. A comprehensive approach to combating smoking imagery in film is therefore required.

By implementing specific measures included in the WHO FCTC Article 13 guidelines, countries can reduce the impact of smoking in movies on youth-smoking initiation. Such measures have enormous potential for averting the growing burden of disease due to tobacco use, particularly in low- and middle-income countries.

4.2 RESEARCH PRIORITIES

Although the causal relationship between smoking imagery in the movies and smoking initiation has now been established, additional research on the impact of intervention policies would be desirable. For example, there are a number of research questions at national level to be addressed.

- How is the local film market regulated, including ratings, distribution rights and censorship?
- What are the economic arrangements between distributors, sponsors, advertisers, producers and public funding and taxation agencies for the production and distribution of movies?
- What mix of national (local) and internationally distributed films are shown in theatres? Distributed on video? Viewed via satellite?
- What is the tobacco imagery content in national movies?
- What methods could be effectively used to measure national adolescent exposure to tobacco imagery?
- What is the exposure of a specific national adolescent population to tobacco imagery?
- How do movies impact smoking initiation among young people in specific national contexts?

4.3 GOING FORWARD

Currently, tobacco kills nearly six million people each year. Tobacco is the only legal consumer product that kills half of its regular customers when used exactly as the manufacturer intended. As a truly toxic and addictive product, it has no place in films that are marketed to youth. With

approximately 100 000 young people around the world taking up smoking each day [112], it is imperative that countries avail themselves of best practice recommendations, such as those outlined in the Guidelines for the implementation of Article 13 of the WHO Framework Convention on Tobacco Control (Tobacco advertising, promotion and sponsorship).

Overall evidence suggests that voluntary and self-regulatory measures have not been successful. Advocacy approaches to obtain stronger labelling requirements (adult ratings) for movies showing smoking imagery as well as anti-smoking messages and assurances that no payoffs are received from the tobacco industry are already receiving wide support in several countries. It is clear that restrictions of smoking imagery in movies with wide global distribution will serve a larger, multi-national public good. Thus, national approaches, and even local approaches, can have wide-ranging positive global effects. Multinational cooperation will also be critical in restricting the global reach of movie-based tobacco imagery.

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Annexes

ANNEX A. MOVIES: SHOWING ON SCREENS NEAR YOU

Motion pictures are watched in theatres but also on disk and increasingly through digital channels. Exposure to film content is vastly underestimated if limited to movie theatre attendance. In the United States, for example, feature films are viewed seven times more often on DVD than in theatres (113). In 2010, US\$ 19 billion was spent on DVDs (74%), Blu-ray high-definition disks (12%), and broadband Internet access to movies (13%), twice the amount spent at the United States box office that year, with digital access to movies growing 15–20% annually (114). Rental and sale of DVDs dropped 44% in the United States as Blu-ray discs and video-on-demand channels took hold (115). In 2009, European consumers spent US\$ 9.5 billion to buy or rent physical discs of all types, down 5% from the year before, with Blu-ray accounting for 7% of sales (116). The audience shift towards digital media is more marked because younger, more frequent moviegoers are leading the transition (117). An Internet industry study forecasts that three billion people (40% of world's population) will be connected to the Internet by 2015, with the explosive growth in connections and traffic led by video-capable, connected devices including phones and tablet computers (118).

Recorded sales do not, however, tell the entire story. Piracy of physical discs and the unlicensed downloading or sharing of movies on peer-to-peer (P2P) online networks leads to additional exposure; P2P copyright violators in particular tend to be young. A movie industry-sponsored survey of more than 20 countries in 2005 concluded that piracy – illegally reproduced DVDs and unlicensed Internet downloads – cost the global movie industry US\$ 18 billion in cinema ticket sales and DVD sales and rentals (7). In 2008, a research firm estimated that online piracy cost the film industry in the United Kingdom as much as it earned through legitimate online channels (119).

ANNEX B. MEASURING EXPOSURES TO TOBACCO IMAGERY IN MOVIES

Assessing exposure to movie content is similar to assessing exposure to advertising. The best methods: (a) measure the reach of a particular movie in the population; and (b) assess how much smoking is in the movie (120).

One popular method determines which movies adolescents have watched and assesses these movies' tobacco content. Adolescents have been shown to recall movies they have seen, a year later, with 90% accuracy (120). It is not possible to ask every respondent about all available movies, so researchers have instead analysed a large sample (500–600) of recent top-grossing movies, then asked participants to pick out films they have seen from a randomly selected subsample of titles (120). The random subsample allows researchers to estimate the population's exposure to a relatively large sample of movies. However, exposure will still be underestimated because even 500–600 movies remains a fraction of all movies available through video discs, broadcast, video-on-demand and Internet download. Using this method, and a study population of more 6500 young people, Sargent and colleagues estimated that adolescents in the United States aged 10–14 were exposed to 13.9 billion tobacco impressions from movies seen in all media, between 1998 and 2003, with half the exposure coming from youth-rated movies (121).

Another method has used box office sales to estimate movies' reach in the population. Each film's box office gross earnings were divided by average ticket price in the year the movie was released to obtain the number of people who saw the movie. Determined by content coding, tobacco incidents in the movie were multiplied by the number of paid admissions to estimate the tobacco impressions delivered. Titus, Polansky and Glantz employed this method to estimate that more than 1700 top-grossing movies released to theatres in Canada and the United States between 1991 and 2008 delivered a total of 650 billion tobacco impressions to audiences of all ages, an average of 34 billion impressions a year in theatres alone (122). More recently, the team has published results showing that in-theatre tobacco impressions had declined to 17 billion by 2009 (89). Applying audience age composition data, gathered by market research companies for in-theatre advertising purposes, supported by audience demographic data published by the film industry, to the same dataset suggests that, on average, adolescents aged 12-17 years received about 18% of the total exposure, or about six billion tobacco impressions in theatres alone each year.

Anderson and colleagues (27) used similar methodology to assess exposure of British adolescents to smoking from 572 top-grossing films in the United Kingdom. They found 28% higher potential adolescent exposure to on-screen tobacco images in the United Kingdom than in the United States because many movies R-rated in the United States, and consequently with a smaller and older audience, were rated accessible to British adolescents without restriction. The study estimated that from 2001 to 2006, movies youth-rated in the United Kingdom delivered more than one billion tobacco impressions to children and adolescents aged 7-17 years.

Using different methods, these studies gave convergent results in the same scale (billions) despite the difference in methods and probably substantial underestimation. The delivery of billions of images of smoking on-screen, in dramatic and vivid movie contexts, contrasts starkly with traditional tobacco advertising. Because image-based tobacco advertising has been eliminated in many countries through the WHO FCTC, smoking images on screens large and small may now represent the vast bulk of media smoking images seen worldwide by adolescents.

ANNEX C. ESTIMATED PUBLIC SUBSIDY FOR TOP-GROSSING MOVIES WITH TOBACCO CONTENT, 2008–2010

Country	No. of movies ^a	No. of smoking movies	Film subsidy (US\$ million) ^b	Subsidy for smoking movies (US\$ millions)	In-theatre tobacco impressions delivered worldwide (millions) ^c
Australia	10	4	77	35	1956
Canada	49	16	398	113	8594
Czech Republic	4	3	42	25	398
France	4	3	31	21	89
Germany	6	5	76	67	11 058
Hungary	2	2	12	12	867
Ireland	1	0	5	0	0
Italy	4	4	32	32	1543
Luxembourg	1	0	7	0	0
Mexico	3	0	15	0	0
New Zealand	9	4	93	51	3694
South Africa	2	1	6	N/A	13
United Kingdom	25	13	297	131	14 374
United States	282	148	1307	653	89 869
Total	402	203	US\$ 2398	US\$ 1140	132 455

N/A not applicable.

a Movies ranked in the top 10 of box office earnings in any week of their initial theatrical release in the "domestic" (Canada and the United States) market, 25 December 2008–24 December 2010.

b For method, see Footnote 12. Subsidy was not estimated for 27 movies in the sample because no production budget was available. These included 16 movies with tobacco content: Canada (n=1); South Africa (n=1); the United Kingdom (n=1); and the United States (n=13). If the subsidy for the movies without published production is assumed to match the average for the rest of the sample, the subsidy for all top-grossing movies is estimated to be approximately US\$ 2.5 billion and the subsidy for movies with smoking to total an estimated US\$ 1.25 billion. Governments, including some not listed here, also grant substantial subsidies to so-called "national" films that may reach top box office rank in a language area or more broadly, and to numerous film projects that do not receive wide distribution or large viewership.

c Estimated on the basis of impressions delivered in "domestic" markets (tobacco incidents x paid admissions multiplied by 3) to capture estimated theatrical impressions delivered in other movie distribution territories worldwide (see Box 2).

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