

**UCSF**

**Tobacco Control Policy Making: United States**

**Title**

Six months later: Are MPAA's tobacco ratings protecting movie audiences?

**Permalink**

<https://escholarship.org/uc/item/4zk2x9sg>

**Authors**

Polansky, Jonathan R.  
Glantz, PhD, Stanton  
Titus, MBA, Kori

**Publication Date**

2007-12-17

*Six months later:*

## **Are MPAA's tobacco ratings protecting movie audiences?**

Movies and smoking since the Motion Picture Association  
of America's May 10, 2007, ratings policy announcement

---

**Jonathan R. Polansky**

Onbeyond LLC

**Kori Titus, MBA**

Breathe California of Sacramento-Emigrant Trails

**Stanton A. Glantz, PhD**

University of California, San Francisco

December 17, 2007

---

## **EXECUTIVE SUMMARY**

In the six months (May 10-November 10, 2007) since the Motion Picture Association of America (MPAA) announced that all smoking would be a factor in movie ratings, there has been no substantial change in the percentage of movies with smoking, across rating categories; in the number of tobacco incidents in these films; nor in the estimated tobacco impressions delivered to audiences in movie theaters, compared to the same period in four previous years.

**Percentage of movies with smoking:** Of the movies that achieved “Top Ten” box office ranking for at least a week, released in the six months after the MPAA’s announcement, 65 percent (51/78) featured tobacco including:

- 39 percent of G and PG movies (7/18)
- 65 percent of PG-13 movies (20/31)
- 83 percent of R-rated movies (24/29).

The majority (53%, 27/51) of top box office movies with smoking released May 10-November 10, 2007, were youth-rated.

**Number of tobacco incidents:** Content analysis of the May 10-November 10, 2007, top box office movie sample finds no substantial difference (i.e., none beyond random year-to-year fluctuation) compared to the previous four years in the number of tobacco incidents in movies, in any rating category.

**Impact on theater audiences:** The total number of tobacco impressions delivered by movies with tobacco imagery showed no substantial change since the MPAA policy announcement, compared to the same period in earlier years.

**MPAA’s use of tobacco descriptors:** Data from weekly MPAA bulletins, which announce the ratings of films as they are awarded, indicate that eleven of the twenty-seven youth-rated, top box office movies with smoking released to theaters in this survey period completed the MPAA rating process after May 10; none of these films received a tobacco descriptor.

After its May 10 announcement, the MPAA gave tobacco descriptors to eleven films released during the survey period by independent distributors (non-MPAA members) and to three such films from MPAA member companies; all fourteen of these films were given limited theatrical release or went directly to video. No films containing smoking that were rated after May 10 and then released nationally received tobacco descriptors. The eleven top box office films with smoking assigned a G, PG and PG-13 rating after May 10, but given no tobacco descriptors, have delivered an estimated three billion tobacco impressions to theater audiences in the U.S. and Canada.

**Conclusion:** Because ratings are awarded after a film has been completed and the MPAA announced last May that its policy was put into immediate effect, sufficient time has passed to observe any meaningful changes in tobacco exposures from youth-rated films. The lack of discernible change indicates that the MPAA’s approach is a failure.

## ***The MPAA's policy***

On May 10, 2007, the Motion Picture Association of America, the trade group representing the six major Hollywood film studios, announced through press releases that it would “now” start considering tobacco in its film rating system. While some news outlets at the time inferred that smoking would in future be rated “R,” the MPAA never stated that smoking would earn an R-rating. It explicitly rejected what it termed an “automatic R.” The actual MPAA policy statement says that:

In the past, illegal teen smoking has been a factor in the rating of films, alongside other parental concerns such as sex, violence and adult language. Now, all smoking will be considered and depictions that glamorize smoking or movies that feature pervasive smoking outside of an historic or other mitigating context may receive a higher rating....

[W]hen a film's rating is affected by the depiction of smoking, that rating will now include phrases such as “glamorized smoking” or “pervasive smoking.”

— MPAA press release, “*Film ratings to consider smoking as a factor,*” May 10, 2007

This position was further described in a letter to the state Attorneys General:

We have updated and clarified the motion picture rating rules for the MPAA/NATO [National Association of Theatre Owners] jointly operated Classification and Rating Administration...The rating board is now considering smoking as a factor alongside other factors including violence, sexual situations and language in films...

— MPAA letter to Maryland Attorney General, May 10, 2007

## **The MPAA's practice**

In the six months after May 10, 2007, there is no evidence that the MPAA increased the rating of any film to “R” or even to PG-13 because of smoking content.

The MPAA has stated that one film since May 10 was up-rated from “G” to “PG” because of smoking content. (*Saving Sarah Cain*, from News Corp.'s Fox Faith unit, aired on cable and will be released on video in January 2008.)

Between May 10 and November 10, 2007, twenty-seven youth-rated films with smoking achieved Top Ten box office status in nationwide release (see Appendix IIc). Twenty of these films (74.1%) were released by MPAA member companies. Only one of these films carried a tobacco descriptor, and this film was rated before the MPAA's May 10 announcement:

*Hairspray* (PG : Time Warner | Released July 20, 2007)<sup>1</sup>

MPAA rating: “Rated PG for language, some suggestive content and momentary teen smoking.”

---

<sup>1</sup> *Hairspray* was rated prior to the MPAA May 10 announcement, using the MPAA's previous standard of “illegal teen smoking,” and released after May 10. The 2007 version of this film contained six times more tobacco incidents than the original 1988 production.

Fourteen other youth-rated films, rated after May 10 and given “limited” release (to only a few screens, not nationally) or sent directly to video during the six month survey period, received tobacco descriptors in their MPAA ratings (see Appendix IId).

The MPAA issues weekly bulletins to the entertainment media listing movie titles and the MPAA ratings they received that week. Data from bulletins issued between May 10 and November 10, 2007, show that:

- 44 percent (11/25) of youth-rated movies known to feature tobacco that completed the MPAA rating process after May 10 and were released before November 10 did *not* receive a tobacco descriptor;
- 75 percent (9/12) of youth-rated movies with tobacco from MPAA member companies, rated and released in this survey period, did *not* receive tobacco rating descriptors;
- No films (11/11) featuring smoking, rated after May 10 and released to theaters nationally, received rating descriptors;
- All (14/14) films rated after May 10 with a tobacco descriptor, released in this survey period, were given only limited release or went straight to video;
- Only 25 percent of youth-rated films known to feature smoking released by MPAA member companies in the survey period were given tobacco descriptors after May 10 — compared with 85 percent of films known to feature smoking released by non-MPAA member companies in the survey period;
- While the number of their youth-rated releases with smoking, in this period, were almost identical (12 from MPAA member companies, 13 from non-MPAA members), the releases from *non*-MPAA member companies were 3.4 times more likely (0.85/0.25) to be rated with tobacco descriptors May 10-November 10 than were the releases from MPAA member companies.

**Table 1 | Youth-rated films with known tobacco content, rated and released May 10-November 10, 2007, by company type and release size**

Company type	Release size	Films released	With tobacco descriptors	% with descriptors
MPAA member	National	9	0	25% (3/12)
	Limited or direct to video	3	3	
Non-MPAA member	National	2	0	85% (11/13)
	Limited or direct to video	11	11	

The information publicly available suggests that the MPAA will not increase the rating of movies with smoking to “R,” the policy recommended by a wide range of public health authorities. Nor can parents rely on MPAA rating descriptors to identify all youth-rated movies with smoking. For example, *The Simpsons Movie* (PG-13: News Corp.), which was rated after May 10 and released nationally in the same week as *Hairspray*, carried no tobacco descriptor despite its tobacco content.

Inconsistency in the MPAA’s treatment of tobacco content is not new. In recent years, MPAA representatives have said that smoking by teenage characters was considered in ratings (for example, see MPAA policy statement above). However, a survey of smoking by characters presented as younger than 18 in U.S. films 2002-2004 found that the MPAA described teen smoking content in only one out of the six top box office PG-13 films featuring such imagery: *Saved!* (PG-13: Sony, 2004).

The MPAA is not implementing its May 10 policy in a way that provides parents consistent information on the presence of tobacco in films, particularly nationally released films. The total recorded box office gross, through December 10, 2007, for all the films that were given a tobacco descriptor after May 10 was \$3.7 million, reflecting their limited release. By comparison, the total for all the *nationally* distributed youth-rated films with tobacco that were *not* given a tobacco descriptor after May 10 is projected to be \$740 million.

### ***Appearance of tobacco on screen since May 10, 2007***

To see if the MPAA’s May 10 announcement had an effect on motion picture content or audience exposure, we compared the top ten box office movies each week — releases from May 10 and November 10, 2007 — with the same period in years 2003-6.<sup>2</sup>

Thumbs Up! Thumbs Down! has used trained monitors to score tobacco incidents in U.S. films since 1994. A tobacco incident is any image of tobacco use, tobacco product or brand in a scene; each cut of the imagery within a scene or re-entry into the frame is counted separately.<sup>3</sup>

The percentage of movies with smoking, the number of smoking incidents and the resulting tobacco impressions delivered to audiences are the result of business decisions by the studio distributors, including decisions to approve and finance certain production packages (including final screenplays, director and casting), to evaluate the market potential of the finished films, and then to schedule and support with advertising their release in theaters or on video. These calculations vary from year to year and studio to studio, so that the aggregate numbers fluctuate.

In looking at whether the MPAA’s rating announcement on May 10, 2007, has affected the numbers discussed below, we must statistically test whether any change exceeds the year-to-

---

<sup>2</sup> Because of seasonal marketing patterns, May-November data may not accurately reflect the entire year’s releases. Films released over the same six month period offer a valid comparison.

<sup>3</sup> This definition of an “incident” differs from that used by Dartmouth and UCSF, which do not consider tobacco displayed in several “cuts” in a single scene as separate incidents. On average, the Thumbs Up! Thumbs Down! methodology yields 3.4 times as many incidents as Dartmouth and UCSF. Because the two techniques are related by this simple multiplier, relative changes over time will be the same using both techniques.

year random fluctuation, produced by a multitude of other factors, observed in the years preceding the announcement. “No substantial change” means that the results did not pass this test and any apparent change is within the year-to-year fluctuations observed between 2003 and 2006.<sup>4</sup> For example: the total number of tobacco incidents in the 2007 film sample is lower than the year before but similar to the counts in 2003 and 2004.

The following statistics apply to all films that were among the top ten box office films for at least one week in the period *May 10–November 10, 2007* compared to the same period in the four preceding years, 2003-6:

### Percentage of films with smoking

- For movies of **all ratings**, two out of three 2007 movies (65%; 51/78) included smoking. There was no substantial change from the frequency observed in the four years before the MPAA’s 2007 announcement.
- 39 percent of 2007 **G/PG** movies (7/18) featured tobacco, no substantial change from the four years previous.
- 65 percent of 2007 **PG-13** films (20/31) featured tobacco imagery, no substantial change from the four years previous.
- 83 percent 2007 **R-rated** films showed smoking (24/29), no substantial change from the four years previous.

### Smoking incidents

- The seventy-eight 2007 films surveyed showed 1,366 tobacco incidents, no substantial change from the four years preceding.
- 5 percent (63/1366) of 2007 tobacco incidents were found in **G/PG** movies, substantially unchanged from the 2003-6 average (92/1725)<sup>5</sup>.
- 41 percent (555/1366) of 2007 incidents were in **PG-13** movies, no substantial change.
- Since the MPAA’s May 10 announcement, 45 percent of tobacco incidents (618/1366) have been carried by **youth-rated** movies (G/PG/PG-13), a rate substantially unchanged from the 2003-6 average (49%; 880/1787).

---

<sup>4</sup> The level observed in 2007 was compared with a linear regression with a dummy variable coding 2007 as 1 and earlier years as 0. The variable of interest was regressed against this dummy variable and also against this dummy variable and year. None of these results yielded a statistically significant result for the 2007 dummy variable coefficient.

<sup>5</sup> The atypical *Good Night, and Good Luck* (PG: Time Warner, 2005), with 250 tobacco incidents, was omitted from this calculation.

## Tobacco impressions

Tobacco impressions, the sum of the products of tobacco incidents in each surveyed film multiplied by the paid admissions to that film, provides a measure of the public's actual exposure to tobacco imagery.<sup>6</sup>

- 44 percent of tobacco impressions delivered to theater audiences in the May 10-Nov. 10, 2007, survey period came from **youth-rated** movies (5 billion/11 billion). There is no substantial change in the total of tobacco impressions from the previous four years.
- 2007 **G/PG** tobacco impressions (900 million) are substantially unchanged from the 2003-6 average (968 million). Eight percent of 2007 tobacco impressions were delivered by G/PG movies (900 million/11 billion).
- **PG-13** tobacco impressions in 2007 (4 billion) are substantially unchanged from previous years.<sup>7</sup> Of 2007 tobacco impressions, 36 percent were delivered by PG-13 films (4 billion/11 billion).
- **R-rated** tobacco impressions in 2007 were substantially unchanged from the same periods in 2003-6.

## Conclusions

Analysis of tobacco appearances and MPAA tobacco rating descriptors since the MPAA's May 10, 2007, announcement indicates that the MPAA did not assign a tobacco descriptor to any top box office film with smoking from a major studio or large independent under the scheme the trade group announced.

The MPAA rated thirteen nationally-released films with smoking, rated G, PG and PG-13, after May 10 but gave none a tobacco descriptor; two of these youth-rated films featured at least fifty tobacco incidents. In six months, the MPAA has not increased the rating of any film released to theaters because of its smoking content.

MPAA ratings for well more than half (61%, 11/18) of films given tobacco descriptors since May 10 and released to a small number of screens or sent straight to video by December 10 employ the terms "brief," "incidental" or "momentary" smoking in descriptors, while nationally-

---

<sup>6</sup> Admissions = U.S. gross reported by IMDbPro.com / average ticket price per year (National Association of Theatre Owners). Average ticket price 2007 estimated at \$6.70. Box office grosses for 2007 films in theaters less than twelve weeks projected using the formulae in Appendix III.

<sup>7</sup> An arithmetic error in the UCSF/TUTD analysis of MPAA ratings and movie tobacco content for the first five months since the MPAA policy announcement, released in October 2007, led to a substantial underestimate of 2006 PG-13 tobacco impressions and the conclusion that PG-13 tobacco impressions in May-October 2007 were triple the May-October 2006 number. In actuality, an insubstantial change in PG-13 impressions was observed from 2006 to 2007 (5210/3944).



released, youth-rated movies with between one and more than 100 tobacco incidents received no tobacco description in their ratings.

Of the three tobacco descriptors given to MPAA member company releases in this survey period, only one — to *Saawariya*, produced in India and given limited distribution in the U.S. by Sony — does not describe “teen” or “underage” smoking, the basis for the MPAA policy supposedly superseded on May 10.

Given the evidence that the MPAA has not, in fact, implemented a more inclusive or aggressive rating policy on smoking, it is no surprise that our survey of the top ten box office films each week from May 10 to November 10 finds no statistically significant change in the percentage of movies featuring tobacco; the number of tobacco incidents in films; or the tobacco impressions delivered to audiences in theaters, compared to the same period in the previous four years. The MPAA’s policy announcement has led to no discernible change in either studio practice or audience exposure.

Because ratings are awarded after a film has been completed and the MPAA announced last May that its policy was “now” in effect, sufficient time has passed to measure progress in terms of substantial reductions in tobacco exposures from youth-rated films. The lack of discernible change indicates that, to date, the MPAA’s approach to reducing youth exposure to smoking on screen is a failure.

---

UCSF’s research has been funded in part by the American Legacy Foundation and other donors. Breathe California of Sacramento-Emigrant Trails is dedicated to healthy air and preventing lung and other air-pollution related diseases by partnering with youth, advocating public policy, supporting air pollution research and educating the public. TUTD data collection is made possible by funds received from Agreement Number 05-45859 with the California Department of Public Health, Tobacco Control Section.

## Appendix I: Data tables

## Movies Released, May-Nov

	Total	G/PG	PG-13	R-rated	Y-rated	Percent
<b>2003</b>	64	11	31	22	42	65.6%
<b>2004</b>	70	16	37	17	53	75.7%
<b>2005</b>	76	18	34	24	52	68.4%
<b>2006</b>	83	18	40	25	58	69.9%
<b>2007</b>	78	18	31	29	49	62.8%
<b>TOTAL</b>	371	81	173	117	254	68.5%

## Movies with Smoking, May-Nov

	Total	G/PG	PG-13	R-rated	Y-rated	Percent
<b>2003</b>	49	4	27	18	31	63.3%
<b>2004</b>	43	4	27	12	31	72.1%
<b>2005</b>	52	7	21	24	28	53.8%
<b>2006</b>	55	4	28	23	32	58.2%
<b>2007</b>	51	7	20	24	27	52.9%
<b>TOTAL</b>	250	26	123	101	149	59.6%

## Paid Admissions, May-Nov (millions)

	Total	G/PG	PG-13	R-rated	Y-rated	Percent
<b>2003</b>	812	173	378	261	551	67.9%
<b>2004</b>	776	221	424	131	645	83.1%
<b>2005</b>	700	175	384	141	559	79.8%
<b>2006</b>	737	171	419	147	590	80.1%
<b>2007</b>	734	210	353	172	563	76.6%
<b>TOTAL</b>	3759	951	1957	851	2907	77.4%

## Tobacco Incidents, May-Nov

	Total	G/PG	PG-13	R-rated	Y-rated	Percent
<b>2003</b>	1153	58	599	496	657	57.0%
<b>2004</b>	1334	54	876	404	930	69.7%
<b>2005</b>	2304	417	702	1185	1119	48.6%
<b>2006</b>	2357	88	727	1542	815	34.6%
<b>2007</b>	1366	63	555	748	618	45.2%
<b>TOTAL</b>	8514	680	3459	4375	4139	48.6%

## Tobacco Impressions, May-Nov (millions)

	Total	G/PG	PG-13	R-rated	Y-rated	Percent
<b>2003</b>	11149	469	5294	5386	5763	51.7%
<b>2004</b>	12869	1036	10269	1565	11304	87.8%
<b>2005</b>	14387	2046	8213	4128	10259	71.3%
<b>2006</b>	12723	322	5908	6493	6230	49.0%
<b>2007</b>	11353	907	4050	6396	4957	43.7%
<b>TOTAL</b>	62482	4780	33734	23968	38514	61.6%

## **Appendix II: Film Lists**

### **II.a | Top box office movies released May-November each delivering >500 million tobacco impressions**

#### **2003**

2 Fast 2 Furious (PG-13)  
Seabiscuit (PG-13)\*  
Matchstick Men (PG-13)  
Mystic River (R)  
Bad Boys II (R)\*  
Open Range (R)

#### **2004**

The Incredibles (PG)  
Anchorman (PG-13)\*  
Saved! (PG-13)  
Spider-Man 2 (PG-13)\*  
Ray (PG-13)\*  
White Chicks (PG-13)

#### **2005**

Good Night, and Good Luck (PG)\*  
The Longest Yard (PG-13)\*  
Cinderella Man (PG-13)\*  
The Dukes of Hazzard (PG-13)

#### **2006**

Superman Returns (PG-13)  
You, Me and Dupree (PG-13)\*  
Idlewild (R)  
Hollywoodland (R)  
The Black Dahlia (R)  
The Departed (R)\*  
Flags of Our Fathers (R)

#### **2007**

Hairspray (PG)  
1408 (PG-13)\*  
Balls of Fury (PG-13)  
The Simpsons Movie (PG-13)  
American Gangster (R)\*  
Superbad (R)

\* Delivered >1 billion tobacco impressions.

#### Note:

66% (19/29) of films in this sample delivering >500 million impressions are youth-rated;  
75% (9/12) of films in this sample delivering more than a billion impressions are youth-rated.

**II.b | Top box office movies released May-November  
each with >100 tobacco incidents**

**2003**

Matchstick Men (PG-13)

**2004**

Anchorman (PG-13)

Ray (PG-13)

Alfie (R)

**2005**

Good Night, and Good Luck (PG)

The Longest Yard (PG-13)

Cinderella Man (PG-13)

Domino (R)

Two for the Money (R)

Waiting (R)

**2006**

You, Me and Dupree (PG-13)

The Black Dahlia (R)

The Departed (R)

Flags of Our Fathers (R)

Hollywoodland (R)

Idlewild (R)

Running with Scissors (R)

**2007**

1408 (PG-13)

Balls of Fury (PG-13)

American Gangster (R)

We Own the Night (R)

## II.c | Top box office films released May 10-November 10, 2007

(Films with tobacco imagery rated by the MPAA after May 10 are highlighted)

TITLE	Company	When Rated	When Released	Rating	Tobacco Descriptor?	Smoking?	Incident Bracket
Ratatouille	Disney	5/2	6/29	G		N	0
Mr. Bean's Holiday	GE	6/13	8/24	G	N	Y	1-9
Bratz: The Movie	Lionsgate	7/18	8/3	PG		N	0
Daddy Day Camp	Sony	4/18	8/8	PG		N	0
Evan Almighty	GE	4/11	6/22	PG		N	0
Fantastic Four...Surfer	News Corp.	6/6	6/15	PG		N	0
Fred Claus	Time Warner	8/15	11/9	PG		N	0
Game Plan, The	Disney	6/6	9/28	PG		N	0
Nightmare Before Christmas in 3-D	Disney	ND	10/19	PG		N	0
Seeker: The Dark Is Rising	News Corp.	9/19	10/5	PG		N	0
Shrek the Third	Viacom	3/14	5/18	PG		N	0
Surf s Up	Sony	3/21	6/8	PG		N	0
Bee Movie	Viacom	9/26	11/2	PG	N	Y	1-9
Hairspray	Time Warner	4/4	7/20	PG	*	Y	30-49
Martian Child	Time Warner	8/23/06	11/2	PG		Y	1-9
Nancy Drew	Time Warner	9/20/06	6/15	PG		Y	1-9
No Reservations	Time Warner	1/3	7/27	PG		Y	10-29
Underdog	Disney	3/14	8/3	PG		Y	1-9
Bourne Ultimatum, The	GE	7/25	8/3	PG-13		N	0
Dan in Real Life	Disney	5/23	10/26	PG-13		N	0
Dragon Wars: D-War	Freestyle	6/6	9/14	PG-13		N	0
Harry Potter...Phoenix	Time Warner	5/16	7/11	PG-13		N	0
Invasion, The	Time Warner	4/18	8/17	PG-13		N	0
License to Wed	Time Warner	4/25	7/3	PG-13		N	0
Live Free or Die Hard	News Corp.	6/20	6/27	PG-13		N	0
Pirates of the Caribbean 3	Disney	4/4	5/25	PG-13		N	0
Sydney White	GE	7/3	9/21	PG-13		N	0
Transformers	Viacom	6/20	7/3	PG-13		N	0
Why Did I Get Married?	Lionsgate	8/29	10/12	PG-13		N	0
1408	Weinstein	6/6	6/22	PG-13	N	Y	50+
Across the Universe	Sony	1/3	9/14	PG-13		Y	50+
Balls of Fury	GE	12/20/06	8/29	PG-13		Y	50+
Comebacks, The	News Corp.	6/20	10/19	PG-13	N	Y	1-9
Delta Farce	Lionsgate	1/10	5/11	PG-13		Y	1-9
Elizabeth: The Golden Age	GE	3/21	10/12	PG-13		Y	1-9
Evening	GE	3/14	6/29	PG-13		Y	10-29
Feel the Noise	Sony	7/25	10/5	PG-13	N	Y	10-29
Gracie	Time Warner	3/28	6/1	PG-13		Y	10-29
Hot Rod	Viacom	7/3	8/3	PG-13	N	Y	1-9
I Now Pronounce You Chuck...Larry	GE	6/20	7/20	PG-13	N	Y	1-9

Mr. Woodcock	Time Warner	2/14	9/14	PG-13		Y	10-29
Nanny Diaries	Weinstein	3/7	8/24	PG-13		Y	1-9
Ocean's Thirteen	Time Warner	3/21	6/8	PG-13		Y	10-29
Rush Hour 3	Time Warner	6/13	8/10	PG-13	N	Y	10-29
Sicko	Lionsgate	5/16	6/22	PG-13	N	Y	1-9
Simpsons Movie, The	News Corp.	5/30	7/27	PG-13	N	Y	10-29
Stardust	Viacom	4/4	8/10	PG-13		Y	1-9
Waitress	News Corp.	3/28	5/2	PG-13		Y	10-29
Who's Your Caddy	Sony	6/6	7/27	PG-13	N	Y	50+
<b>R-rated films</b>							
28 Weeks Later	News Corp.	4/4	5/11	R		N	0
30 Days of Night	Sony	7/25	10/19	R		N	0
Good Luck Chuck	Lionsgate	8/22	9/21	R		N	0
Lions for Lambs	Sony	9/26	11/9	R		N	0
P2	Summit	ND	11/9	R		N	0
3:10 to Yuma	Lionsgate	7/18	9/7	R	N	Y	1-9
American Gangster	GE	4/4	11/2	R		Y	50+
Brave One, The	Time Warner	7/11	9/14	R	N	Y	30-49
Bug	Lionsgate	ND	5/25	R		Y	30-49
Death Sentence	News Corp.	5/2	8/31	R		Y	30-49
Eastern Promises	GE	8/1	9/14	R	N	Y	50+
Georgia Rule	GE	ND	5/11	R		Y	1-9
Gone Baby Gone	Disney	3/28	10/19	R		Y	1-9
Halloween	Weinstein	8/22	8/31	R	N	Y	10-29
Heartbreak Kid, The	Viacom	8/1	10/5	R	N	Y	1-9
Hostel: Part II	Lionsgate	5/9	6/8	R		Y	10-29
I Know Who Killed Me	Sony	6/6	7/27	R	N	Y	30-49
Kingdom, The	GE	ND	9/28	R		Y	10-29
Knocked Up	GE	1/31	6/1	R		Y	1-9
Michael Clayton	Time Warner	11/15/06	10/5	R		Y	10-29
Mighty Heart, A	Viacom	4/25	6/22	R		Y	10-29
Mr. Brooks	Sony	3/7	6/1	R		Y	1-9
Rendition	Time Warner	10/3	10/19	R	N	Y	10-29
Resident Evil: Extinction	Sony	7/11	9/21	R	N	Y	1-9
Saw IV	Lionsgate	8/29	10/26	R	N	Y	1-9
Shoot 'Em Up	Time Warner	9/5	9/7	R	N	Y	1-9
Superbad	Sony	4/4	8/17	R		Y	30-49
War	Lionsgate	7/18	8/24	R	N	Y	30-49
We Own the Night	Sony	5/2	10/12	R		Y	50+

\* *Hairspray* was rated before May 10 on the basis of "underage" smoking, now superceded.

Notes: There were more youth-rated films with 50+ tobacco incidents (n=4) than R-rated ones (n=3) among the top box office films in this survey period. Neither of the two youth-rated films with 50+ incidents rated since May 10 received a tobacco descriptor.

Lionsgate and The Weinstein Company are the two largest non-MPAA member producer-distributors.

*Bee Movie*, which treats tobacco smoke as poison gas, would not be subject to the R-rating for future movies with tobacco imagery endorsed by leading health authorities as the effective way to clear smoking from the films adolescents see most. The R-rating policy excepts depictions of the dire consequences of tobacco use and depictions of actual historical characters who smoked. The latter exception would apply to the documentary *Sicko*, listed in this table, and the three documentaries — *Deep Water*, *In the Shadow of the Moon* and *Sharkwater* — in Table II.d (below).

## II.d | Films given tobacco descriptors by the MPAA since May 10, 2007

(Titles distributed by MPAA member companies are highlighted)

TITLE	Company	Origin	Date Rated	Release Date	2007 US Release	Rating	Tobacco Descriptor	US Gross to 12/10
<b>Released in survey period</b>								
Closing Escrow	Magnolia	US	7/11	8/24	Limited, Video	PG	"incidental smoking"	\$6,000
December Boys	Time Warner	Australia	6/6	9/14	Limited	PG-13	"underage... smoking"	\$46,000
Deep Water (Doc)	IFC	UK	8/1	8/24	Limited	PG	"incidental smoking"	\$260,000
Final Season, The	Yari	US	8/22	10/12	Limited	PG	"some teen smoking"	\$1.1 million
Guarding Eddy (2005)	Imageworks	US	6/13	8/28	Video	PG	"brief smoking"	ND
In the Shadow of the Moon (Doc)	ThinkFilm	US	6/13	9/7	Limited	PG	"incidental smoking"	\$1.1 million
List, The	Level Path	US	7/25	8/10	Limited	PG	"brief incidental smoking"	\$140,000
Naming Number Two	Cyan	New Zealand	7/3	7/27	Limited	PG	"smoking"	ND
Randy and the Mob	Capricorn	US	8/8	9/21	Limited	PG	"momentary smoking"	\$45,000
Return with Honor	Exel	US	8/1	9/14	Limited	PG	"brief smoking"	\$102,000
Saawariya	Sony	India	10/17	11/9	Limited	PG	"incidental smoking"	\$885,000
Saving Sarah Cain	News Corp.	US	6/20	8/19	Cable > Video	PG	"brief teen smoking"	ND

Sea of Dreams	Success	Mexico	8/22	9/21	Limited	PG	"incidental smoking"	<\$50,000
Sharkwater (Doc)	Freestyle	Canada	8/15	9/28	Limited	PG	"some smoking"	\$30,000

**Released after end of survey period, November 10**

Grace is Gone	Weinstein	US	9/19	12/7	Limited	PG-13	"teen smoking"	ND
Lisbon Story (1994)	Fox Lorber	Germany/Portugal	9/12	11/20	Video	PG	"brief smoking"	ND
Luna: Spirit of the Whale	Trinity	Canada	8/29	11/20	Video	PG	"brief teen smoking"	ND
Rocket, The (2005)	Palm	Canada	8/22	11/30	Video	PG	"historical smoking throughout"	ND

**Unreleased or no confirmed release**

Caramel	Roadside Attractions	France/Lebanon	10/10	2/1/08	ND	PG	"some smoking"	ND
Christmas Cottage	Lionsgate	US	9/26	ND	ND	PG	"smoking"	ND
Definitely, Maybe	GE	US	5/23	2/14/08	ND	PG-13	"smoking"	ND
Run, Fat Boy, Run	Time Warner	UK	6/13	3/28/08	ND	PG	"smoking"	ND
Water Horse, The	Sony	US	10/17	12/25	ND	PG	"brief smoking"	ND
Welcome to Paradise	First Look	US	7/11	10/2007	ND	PG	"teen smoking"	ND

Notes: Of the 24 titles given tobacco descriptors since May 10, 17 (70.8%) have been released either to a limited number of screens or direct to video.

Of releases given tobacco descriptors, most (52.9%, 9/17) were produced outside the U.S.

One of the 17 releases was rated PG-13; one film (*Saving Sarah Cain*) reportedly had its rating increased for smoking content, from G to PG.

25 percent (6/24) tobacco descriptors given since May 10 refer to "teen" or "underage" smoking; 75 percent (18/24) refer to "some," "brief," "momentary" or "incidental" smoking.

Fox Lorber is a video distributor unrelated to 20th Century Fox or News Corp., 20th Century Fox's parent company.



### Appendix III: Projecting theatrical box office

To calculate tobacco impressions, total box office was projected for 2007 films with fewer than 12 weeks of data reported at the time of analysis, based on results from 2006. Of these, two cases required the formulae for films reporting *less* than \$5 million in box office grosses at Week 2 and Week 4, and three cases required the formula for films reporting *more* than \$5 million at Week 2. The table below reports the method's reliability:

Box office at Week #	Predicted final box office receipts, B (\$mil) W4 = 4 week box office (\$mil) W2 = 2 week box office (\$mil)	Media Residual Inter-Quartile Range (\$mil)	N	R <sup>2</sup>
<b>&gt;= \$5 million</b>				
4 weeks	$B = \text{EXP}(-0.0573 + 1.04 \cdot \text{LN}(W4))$	1.21 (0.38-2.94)	34	0.933
2 weeks	$B = \text{EXP}(0.153 + 1.09 \cdot \text{LN}(W2))$	3.21 (1.6-7.5)	34	0.966
<b>&lt; \$5 million</b>				
4 weeks	$B = \text{EXP}(0.622 + 0.972 \cdot \text{LN}(W4))$	1.85 (0.52-4.51)	33	0.753
2 weeks	$B = \text{EXP}(1.57 + 0.678 \cdot \text{LN}(W2))$	2.57 (1.15-7.20)	33	0.309

