

Assigning an '18' rating to movies with tobacco imagery is essential to reduce youth smoking

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Exposure to smoking in movies is a potent stimulus for youth smoking.¹⁻⁴ In this issue of *Thorax*, (see page 417) McNeil *et al* document the occurrence of tobacco in the most commercially successful films released in the UK from 1989 to 2008.⁵ While there is a decrease in the mean rate of tobacco episodes (which includes tobacco use, tobacco paraphernalia, inferred tobacco use, brand appearances) over time, 70% of the films had one or more tobacco episodes. Tobacco or tobacco-related products appeared in 68% of all youth-rated films (British Board of Film Classification (BBFC) rating '15' and below). More important, of the films from 2004 to 2008 that contained tobacco, 97% were rated BBFC 15 and lower and 73% were deemed suitable for those <15 years of age.

This continuing high level of exposure to smoking in films rated suitable for youth undermines efforts to reduce smoking among children and adolescents, not only in Britain but globally. Approximately one in five young teenagers (13-15 years) worldwide is a regular smoker with 80-100 000 children taking up the habit every day.⁶⁻⁷ One in six 15-year-old girls in England (17%) and Scotland (16%) were regular smokers in 2008, and the prevalence of smoking among 15-year-old boys in Scotland actually increased from 12% in 2006 to 14% in 2008.⁸⁻⁹ Smoking prevalence and usage are highest among youth living in deprived areas. For example, 29% of 15-year-old regular smokers living in the most

deprived areas in Scotland reported smoking more than 70 cigarettes a week compared with only 12% in the most affluent areas.⁹

Concern about the impact of exposure to tobacco imagery in movies on youth smoking led the World Health Organization (WHO) to recommend that all future movies with scenes of smoking should be given an adult rating, with the possible exception of movies that reflect the dangers of tobacco use or that depict smoking by a historical figure who actually smoked.¹ Implementing this policy would substantially reduce the dose of on-screen smoking delivered to children and adolescents and the corresponding response of smoking initiation.

Efforts to implement the WHO recommendations in the UK have been led by public health and community advocates in Liverpool, north-west England, where the prevalence of youth smoking and tobacco-related harm are considerably higher than elsewhere in the country. Smoke-free Liverpool lobbied but failed to persuade the BBFC to faithfully apply its own rules for rating films that contain smoking. In particular, the BBFC's rules state that an 18 rating should be awarded to films 'where material or treatment appears to the Board to risk harm to individuals or, through their behaviour, to society',¹⁰ a standard easily met by on-screen tobacco imagery given the proven causal relationship between this exposure and initiation and progression of smoking. The results of the study by McNeil *et al* clearly show that the BBFC has not been implementing its stated policy.

Because BBFC ratings are only advisory to local councils, in December 2008 advocates lobbied Liverpool City Council to apply an adult ('18') rating to films containing smoking within the local jurisdiction. The council undertook a 3-month consultation on this proposal but declined to act during a full meeting on 9 December 2009, instead asking for more

research directly relevant to England and Liverpool.

In this issue of *Thorax*, McNeil *et al* provide precisely the evidence that Liverpool seeks.

The stakes for British youth are very high in this debate. Studies from the USA estimate the attributable risk of smoking initiation associated with exposure to on-screen smoking. After controlling for a wide range of confounders, four studies in the USA have estimated the attributable risk fraction of adolescent and young adult smokers.¹¹⁻¹⁴ A New England cohort¹¹ (middle school students at baseline) revealed that 0.52 (95% CI 0.30 to 0.67) of those who 'tried smoking' was attributable to smoking in the movies. A later follow-up in the same cohort¹² found an attributable risk fraction of 0.35 (95% CI 0.14 to 0.56) for established smoking at young adulthood due to movie smoking exposure. A different northern New England longitudinal cohort¹³ that started with younger children (4th-6th graders at baseline) found that 0.46 (95% CI 0.11 to 0.70) of youth who tried smoking was attributable to movie exposure. Finally, a national cross-sectional study¹⁴ (adolescents aged 10-14 years) found that the adjusted attributable fraction for having tried smoking was 0.38 (95% CI 0.20 to 0.56). We pooled these four estimates (using Stata 10 metan) to obtain an overall attributable risk estimate of 0.44 (CI 0.34 to 0.58) and applied this pooled estimate to smoking prevalence estimates¹⁵ to estimate the number of current and ever smokers aged 11-15 years in Britain attributable to exposure to smoking in movies.

The prevalence of 11-15-year-olds whose ever smoking could be attributable to exposure to smoking in movies was 11.0%, 13.1% and 13.7% in England, Scotland and Wales. The respective prevalence figures for current smoking attributable to exposure to smoking in movies was 5.2%, 5.3% and 5.3%. In 2006 the number of 11-15-year-olds whose ever smoking was attributable to exposure to smoking in movies was 350 000, 41 000 and 26 000 in England, Scotland and Wales. The number whose current smoking was attributable to exposure to smoking in movies was 167 000, 17 000 and 10 000, respectively.

These estimates, while substantial, almost certainly underestimate the number of British youth who are smoking because of exposure to smoking in movies for two reasons. First, because the BBFC rates many US adult-content 'R' films

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(under 17 not admitted without a parent) as appropriate for youth ('15' or lower), British youth are exposed to much higher doses of on-screen smoking than the American youth used to develop the attributable risks quoted above. Anderson *et al* found that, between 2001 and 2006, British youth were exposed to 28% more smoking impressions in UK youth-rated movies than American youth-rated movies because 79% of movies rated for adults in the USA ('R') were classified as suitable for youth in the UK.¹⁶ Second, Britain has strong restrictions on conventional advertising whereas the USA has few such restrictions. Thus, the relative importance of smoking in movies as a stimulant for adolescent smoking will be higher in Britain than in the USA.

A new tobacco control strategy for England was published on 1 February 2010, a key objective of which is to 'stop the inflow of young people recruited as smokers',¹⁷ but then it timidly endorses current policy that merely recommends 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 glamourised in other programmes likely to be widely seen or heard by under-18s unless there is editorial justification'. There are two problems with these recommendations. First, it is like saying 'cigarette adverts should not appear in magazines primarily for children unless there is a strong editorial justification' and, second, there is no clear standard of what 'editorial justification' means.

In contrast, McNeil *et al* call for 'more rational application of BBFC classification, such as ensuring that smoking and other tobacco use be excluded from all youth-rated films (BBFC U, PG, 12/12A and 15)

with very limited specific exceptions, as the WHO has recommended. We agree with McNeil *et al*. Ensuring that the BBFC faithfully implements its stated policy and rates movies containing smoking are unambiguously assigned a rating of '18' would be the simplest and least expensive way to achieve this important goal.

Failing rapid and effective action at the national level, Liverpool and other local councils should exercise their authority to protect their youth from tobacco promotions embedded in films.

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Corrections

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Conway Morris A, Kefala K, Wilkinson TS, *et al*. Diagnostic importance of pulmonary interleukin-1b and interleukin-8 in ventilator-associated pneumonia. *Thorax* 2010; **65**:201–7. This article should have included the note that Dr Kefala was joint first author.

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Polverino E, Dambava P, Cilloniz C, *et al*. Nursing home-acquired pneumonia: a 10 year single-centre experience. *Thorax* 2010; **65**:354–59. The correct affiliation for affiliation 1 should have read “Respiratory Department, Hospital Clinic-IDIBAPS, Barcelona-Spain, Centro de Investigación Biomedica En Red-Enfermedades Respiratorias (CibeRes, CB06/06/0028, el Ciberes es una iniciativa del ISCIII) – 2009SGRQ - <http://www.idibapsrespiratoryresearch.org>.”

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Millett C, Glantz SA. Assigning an ‘18’ rating to movies with tobacco imagery is essential to reduce youth smoking. *Thorax* 2010; **65**:377–8. The authors referred to a paper by McNeil *et al*; this should have been Lyons *et al* (Lyons A, McNeill A, Chen Y, *et al*).

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Lyons A, McNeill A, Chen Y, *et al*. Tobacco and tobacco branding in films most popular in the UK from 1989 to 2008. *Thorax* 2010; **65**:417–22. There is an error in figure legend 2 which currently reads “Trends in all tobacco intervals and tobacco use intervals per hour per **day** by British Board of Film Classification (BBFC) category (all figures expressed as means).” It should have read: “Trends in all tobacco intervals and tobacco use intervals per hour per **year** by British Board of Film Classification (BBFC) category (all figures expressed as means).”

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Kemp SV, El Batrawy SH, Harrison RN, *et al*. Learning curves for endobronchial ultrasound using cusum analysis. *Thorax* 2010; **65**:534–8. The author name A Roselli should have read A Rosell.