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Consequences of marketing exceptions in the Master Settlement Agreement: Exposure of youth to adult only tobacco promotions.

Bogen K; Biener L; Nyman A. *Nicotine & Tobacco Research* 8(3): 467-471, 2006. (17 refs.)

The Master Settlement Agreement between a consortium of tobacco companies and 46 states contains many restrictions on tobacco sales and advertising that were designed to reduce youth exposure to tobacco promotions. Most of the restrictions include an exception for "adult-only" facilities. The present study investigated the extent to which youth are being exposed to marketing that is presumably limited to adults. Using data from a state-wide random-digit-dialed survey of 3,863 Massachusetts youth aged 12-17 years, we found that about half of all youth in this age group reported seeing cigarettes advertised at events, concerts, bars, or clubs in the past 12 months, and that about 5% of youth in this age group reported being present at a venue where free samples of cigarettes were being distributed. Youth exposed to this marketing were those most at risk for progression to established smoking. To our knowledge, this is the first study to estimate youth exposure to advertisements designed for adult-only venues. In light of the large body of evidence that exposure to tobacco advertising and promotion increases tobacco use among youth, our findings demonstrate the need to close the "adult-only" loophole.

An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays.

Wakefield M; Germain D; Durkin S; Henriksen L. *Health Education Research* 21(3): 338-347, 2006. (16 refs.)

By creating a sense of familiarity with tobacco, cigarette advertising and bold packaging displays in stores where children often visit may help to predispose them to smoking. A total of 605 ninth-grade students were randomly allocated to view a photograph of a typical convenience store point-of-sale which had been digitally manipulated to show either cigarette advertising and pack displays, pack displays only or no cigarettes. Students then completed a self-administered questionnaire. Compared with those who viewed the no cigarettes, students either in the display only condition or cigarette advertising condition perceived it would be easier to purchase tobacco from these stores. Those who saw the cigarette advertising perceived it would be less likely they would be asked for proof of age, and tended to think a greater number of stores would sell cigarettes to them, compared with respondents who saw no tobacco products. Respondents in the display only condition tended to recall displayed cigarette brands more often than respondents who saw no cigarettes. Cigarette advertising similarly influenced students, and tended to weaken students' resolve not to smoke in future. Retail tobacco advertising as well as cigarette pack displays may have adverse influences on youth, suggesting that tighter tobacco marketing restrictions are needed.

Are menthol cigarettes a starter product for youth?

Hersey JC; Ng SW; Nonnemaker JM; Mowery P; Thomas KY; Vilsaint MC et al. *Nicotine & Tobacco Research* 8(3): 403-413, 2006. (39 refs.)

This study assessed the relationship between menthol use and nicotine dependence. Data from the National Youth Tobacco Survey indicated that menthol cigarette use was significantly more common among newer, younger smokers. Additionally, youth who smoked menthol cigarettes had significantly higher scores on a scale of nicotine dependence compared with non-menthol smokers, controlling for demographic background and the length, frequency, and level of smoking. The study suggests that menthol cigarettes are a starter product that may be associated with smoking uptake by youth.

Effects of exposure of youths at risk for smoking to television advertising for nicotine replacement therapy and Zyban (R): An experimental study.

Wakefield M; Durrant R. *Health Communication* 19(3): 253-258, 2006. (12 refs.)

Television advertising for nicotine replacement therapy (NRT) and Zyban (R) exposes the entire population, including adolescents, to persuasive messages about these smoking-cessation products. There is a risk that adolescents exposed to the advertising might underestimate addictiveness or

perceive an unintended message that it is easy to quit smoking. This is of concern because optimism about quitting is a major predictor of trial and progression to heavier smoking among youths. We randomly allocated 492 youths age 12 to 14 years to one of three viewing conditions in which they viewed either (a) 4 NRT ads, (b) 4 Zyban ads, or (c) 4 ads promoting nonpharmacologic cessation services, such as telephone quitlines. After viewing each ad twice, participants completed a I-page rating form. After all ads had been viewed, youths completed a questionnaire that measured intentions to smoke in the future, perceived addictiveness of smoking, perceived risks and benefits of smoking, and perceived need for pharmaceutical products and services. There were no differences in the composition of groups by age, gender, or smoking uptake. Youths were more likely to agree that the NRT and Zyban ads, compared with the quitline ads, made it seem easy to quit smoking ($p < .001$). However, there were no systematic differences between groups in perceived addictiveness of smoking, intentions to smoke, or other outcomes. This study suggests that although ads for NRT and Zyban may create "face value" impressions that it is easier to quit, at least in an experimental context in which exposure to ads for telephone quitlines is equal, such appraisals do not undermine more enduring perceptions about smoking. Field research taking into account the relatively high volume of pharmaceutical cessation product advertising is needed.

Longitudinal effects of pro-tobacco and anti-tobacco messages on adolescent smoking susceptibility.

Weiss JW; Cen S; Schuster DV; Unger JB; Johnson CA; Mouttapa M et al. *Nicotine & Tobacco Research* 8(3): 455-465, 2006. (55 refs.)

We examined the longitudinal impact of self-reported exposure to pro- and anti-tobacco media on adolescents' susceptibility to smoking, using in-school surveys from a culturally diverse sample. Ethnicity and acculturation also were examined as potential moderators. Middle-school students (N=2,292) completed self-report questionnaires during the 6th, 7th, and 8th grades. Chi-square analyses were conducted to determine whether reported exposure to pro- and anti-tobacco media varied according to ethnicity, acculturation, and immigration status. Logistic regression models were used to examine whether pro- and anti-tobacco media exposure in 6th grade was associated with susceptibility to smoking by later grades. Recall of people smoking in television programs and pro-tobacco advertisements in stores was associated with adolescent smoking susceptibility. Exposure to anti-tobacco advertisements on television protected against susceptibility. No significant interaction effects between pro- and anti-tobacco media exposure on smoking susceptibility were found. Ethnicity and acculturation did not moderate these associations. Our longitudinal study provides evidence that pro-tobacco media and advertising increases susceptibility to smoking over time. More important, anti-tobacco advertisements are not sufficient to reduce the harmful effects of adolescent exposure to pro-tobacco media. Policy-level interventions such as restrictions in tobacco advertising may be necessary to prevent adolescent smoking.

Milestones in the natural course of onset of cigarette use among adolescents.

Gervais A; O'Loughlin J; Meshefedjian G; Bancej C; Tremblay M. *Canadian Medical Association Journal* 175(3): 255-261, 2006. (25 refs.)

Background: The natural course of onset of cigarette use has been conceptualized as progressing sequentially through 5 stages (preparation, trying, irregular use, regular use, nicotine-dependent smoking). However, recent studies suggest that symptoms of nicotine dependence can occur early in the onset process, raising questions about the validity of this model. The objective of our study was to describe the sequence and timing of 12 milestones (6 related to cigarette use and 6 to symptoms of nicotine dependence) during onset of cigarette use. Methods: Grade 7 students in 10 secondary schools in Montreal (n = 1293) were followed prospectively every 3-4 months for 5 years. Using Kaplan-Meier analysis, we computed the number of months after first puff at which the cumulative probability of attaining each milestone was 25%, among 311 participants who initiated cigarette use during follow-up. Results: Inhalation rapidly followed first puff. The cumulative probability of inhalation was 25% at 1.5 months (95% confidence interval [CI] 1.5-2.5). The cumulative probability (and 95% CI) was 2.5 months (1.5-2.5) for mental addiction, 2.5 (1.0-3.0) for smoking a whole cigarette, 4.5 (2.5-8.8) for cravings, 5.4 (3.8-9.7) for physical addiction, 8.8 (7.0-11.9) for monthly smoking, 11.0 (6.4-16.8) for withdrawal symptoms, 13.0 (10.3-20.5) for tolerance, 19.4 (14.5-31.7) for weekly smoking, 19.5 (14.0-23.9) for lifetime total of 100 cigarettes, 23.1 (19.7-37.6) for daily smoking and 40.6 (35.1-56.0) for conversion to tobacco dependence. Interpretation: Symptoms of nicotine dependence develop soon after first puff and can

precede monthly, weekly and daily smoking. Cessation interventions that manage dependence symptoms may be needed soon after first puff.

Reasons for wanting to quit: Ethnic differences among cessation-seeking adolescent smokers.
Luther EJ; Bagot KS; Franken FH; Moolchan ET. *Ethnicity & Disease* 16(3): 739-743, 2006. (23 refs.)
Objective: Enhancing adolescent cessation requires an understanding of approaches that will motivate youths to quit smoking. Methods: We compared reasons for wanting to quit expressed by European Americans to those of African American youths. Adolescent cessation-seeking smokers completed telephone interviews regarding their smoking behavior and reasons for wanting to quit in an open-ended format. Responses were then classified into nine categories. Results: Participants included 1,268 Baltimore-area adolescents (mean age 15.6 +/- 1.7 years, 60% female, 58% European American, mean Fagerstrom Test for Nicotine Dependence 5.8 +/- 2.2). While both groups broadly cited health as the predominant reason for wanting to quit, chi-square analyses of further stratification of health into general, future, and current health concerns showed that European Americans were more likely to endorse current health reasons (P <.001), while African Americans were more likely to state general health reasons (P=.004). European Americans were more likely to state cost (P=.002) or to not give a reason for wanting to quit (P=.008), while African Americans more frequently reported a lack of positive (pharmacologic or social) reinforcement (P <.001). Conclusions: The development of culturally tailored messages may help enhance smoking cessation efforts among adolescents.

School-based smoking cessation programs: Do youth smokers want to participate in these programs?
Leatherdale ST. *Addictive Behaviors* 31(8): 1449-1453, 2006. (10 refs.)
The purpose of the present study was to examine characteristics that predict interest in school-based cessation programs among 3136 youth smokers with intentions to quit smoking. The majority of youth smokers report that they would not join a school-based smoking cessation program. However, improving awareness of these types of programs among students is important as sub-populations of youth smokers were more likely to be interested in school-based cessation initiatives when aware that such programs exist. Future school-based cessation intervention outcomes might be improved if programs are targeted to the youth that are most likely to use them, if more youth can be made aware of existing programs, and if the benefits of participating in such programs can be more adequately conveyed to youth smokers.

Tobacco promotion and the initiation of tobacco use: Assessing the evidence for causality. (review).
DiFranza JR; Wellman RJ; Sargent JD; Weitzman M. *Pediatrics* 117(6): E1237-E1248, 2006. (136 refs.)
Objective. We sought to determine whether there is evidence of a causal link between exposure to tobacco promotion and the initiation of tobacco use by children. Methods. We conducted a structured search in Medline, PsycINFO, and Abi/Inform Global to identify relevant empirical research. The literature was examined against the Hill epidemiologic criteria for determining causality. Results. (1) Children are exposed to tobacco promotion before the initiation of tobacco use; (2) exposure increases the risk for initiation; (3) there is a dose-response relationship, with greater exposure resulting in higher risk; (4) the increased risk is robust; it is observed with various study methods, in multiple populations, and with various forms of promotion and persists after controlling for other factors; (5) scientifically plausible mechanisms whereby promotion could influence initiation exist; and (6) no explanation other than causality can account for the evidence. Conclusions. Promotions foster positive attitudes, beliefs, and expectations regarding tobacco use. This fosters intentions to use and increases the likelihood of initiation. Greater exposure to promotion leads to higher risk. This is seen in diverse cultures and persists when other risk factors, such as socioeconomic status or parental and peer smoking, are controlled. Causality is the only plausible scientific explanation for the observed data. The evidence satisfies the Hill criteria, indicating that exposure to tobacco promotion causes children to initiate tobacco use.

Adolescent smokers screened for a nicotine replacement treatment trial: Correlates of eligibility and enrollment.
Robinson ML; Schroeder JR; Moolchan ET. *Nicotine & Tobacco Research* 8(3): 447-454, 2006. (25 refs.)
The enrollment process determines the study sample and external validity of clinical trial results; however, few reports describe the process and outcome of screening efforts for smoking cessation studies among

adolescents. We describe and evaluate a screening protocol to enroll adolescent smokers for a randomized clinical trial of nicotine replacement therapy. Adolescent smokers obtained the recruitment call-in number (1-800-NO-SMOKE) via media and other advertisements. Trained recruitment staff collected information using an internally develop-ed, targeted telephone screening interview, which was used to determine pre-eligibility for the clinical trial. Correlates of qualification and of study enrollment were determined. Among 1,347 adolescents screened, 329 (24.4%) were eligible to participate in the trial. Light smoking (39.1%) and lack of parental support (14.8%) were the biggest contributors to ineligibility. Eligible adolescents were more likely to be female (66.9% vs. 58.2%, p=.0052) and more likely to be European American (63.5% vs. 52.2%, p=.0003). The higher rates of ineligibility for African Americans and boys were partly explained by lower scores on the Fagerstrom Test for Nicotine Dependence. Of those eligible to participate in the trial, 159 (48.3%) enrolled. Results underscore the need for screening instruments that are measurement-invariant across ethnicities and gender, and for enrollment strategies that maximize inclusion of eligible participants.

Use of cigarettes and other tobacco products among students aged 13-15 years - Worldwide, 1999-2005
(Reprinted from MMWR, vol 55, pg 553, 2006).
Mochizuki-Kobayashi Y; Fishbum B; Baptiste J; El-Awa F; Nikogosian H; Peruga A et al. *Journal of the American Medical Association* 295(24): 2842-2843, 2006. (1 refs.)
The Global Youth Tobacco Survey (GYTS), initiated in 1999 by the World Health Organization (WHO), CDC, and the Canadian Public Health Association, is a school-based survey that includes questions on prevalence of cigarette and other tobacco use; attitudes toward tobacco; access to tobacco products; exposure to secondhand smoke, school curricula on tobacco, media, and advertising; and smoking cessation. This report presents estimates of self-reported cigarette and other tobacco-product use during 1999-2005 in 132 different countries and the Gaza Strip/West Bank. Among the findings are that nearly two in 10 students (17.3%) were currently using any form of tobacco. Any tobacco use was highest in the American and European European regions (22.2% and 19.8%, respectively) and lowest in the South-East Asian and Western Pacific regions (12.9% and 11.4%, respectively). Boys were significantly more likely than girls to currently use any tobacco products (i.e., cigarettes or tobacco products other than cigarettes) in the Eastern Mediterranean, South-East Asian, and Western Pacific regions. Approximately one of every 10 students (8.9%) currently smoked cigarettes. Current cigarette smoking was highest in the European and American regions (17.9% and 17.5%, respectively) and lowest in the South-East Asian, Eastern Mediterranean, and Western Pacific regions (4.3%, 5.0%, and 6.5%, respectively). Boys were significantly more likely than girls to smoke cigarettes in the African, South-East Asian, and Western Pacific regions. Approximately one of every 10 students (11.2%) currently used tobacco products other than cigarettes. Use of other tobacco products was highest in the South-East Asian and Eastern Mediterranean regions (13.3% and 12.9%, respectively) and lowest in the Western Pacific and European regions (6.4% and 8.1%, respectively). Approximately one of every 10 students (11.2%) currently used tobacco products other than cigarettes. The popularity of forms of tobacco other than cigarettes varies by regions: in the Eastern Mediterranean, shisha (flavored tobacco smoked in hookah pipes) is prevalent3; in South-East Asia, bidis, smokeless tobacco (i.e. betel , quid, gutka, and creamy snuff), and shisha use are popular; in the Western Pacific, betel nut is chewed with tobacco5; pipe, snuff, and rolled tobacco leaves are common in the African Region; and in the Americas and Europe, use of cigars and smokeless tobacco are used.

Nine-year prediction of adolescent smoking by number of smoking parents.
Peterson AV; Leroux BG; Bricker J; Kealey KA; Marek PM; Sarason IG et al. *Addictive Behaviors* 31(5): 788-801, 2006. (73 refs.)
It is important to identify the role of family influences on child smoking acquisition. Using a well-followed (> 90%) cohort of 3012 children and their parents, this study prospectively investigated the influence of smoking by 0 vs. 1 vs. 2 parents when the children were young (3rd grade), on whether the children subsequently became daily smokers. It is the only study to investigate the prediction of child/adolescent smoking at the end of the smoking acquisition period (12th grade) by parental smoking at the start of the period (3rd grade). Analyses revealed that having one parent who smokes substantially increases the risk that children will become daily smokers, relative to families where neither parent smokes (OR= 1.90, p < .01). There is no evidence that the increased risk depends on parent or child gender.