**The impact of advertising on alcohol consumption amongst teenagers and young adults**

**The influences of alcohol consumption**

Commencing and continuing to drink alcohol is influenced by many interrelated factors including family and social influences, price, accessibility, education and advertising. It is true to say that no one factor alone is responsible for alcohol consumption and it is equally true to say that many factors working together in a synergistic way has led to the current alcohol drinking culture in Ireland.

Young people are a particularly important group in addressing our drinking culture. Most people now commence drinking in their teenage and early adult years. Also, the effects of alcohol on the developing brain are different to those on the adult brain with those who commence drinking earlier more likely to experience alcohol-related harms. The youth sector is an important part of the alcohol market as heavier drinking is concentrated in the late teenage years and in young adulthood. Using figures from a 2006 study by the Office of Tobacco Control1 we can estimate that 12–17-year-olds in Ireland spend €144,056,552 per year on alcohol. For children in this age group it is illegal to purchase alcohol; it is therefore reasonable to conclude that the illegal alcohol market in Ireland arising from underage drinking is considerable.

This paper does not suggest that advertising is the most important predictor of alcohol consumption. Rather, it attempts to describe why young people like alcohol advertising, their exposure to these adverts, and most importantly, the impact of this exposure on their decision to commence drinking or to drink in greater quantities.

**Overview of alcohol use among young people**

According to the Health Behaviour in Schoolchildren (HBSC) survey in 2006, 14% of 15-year-olds and 21% of 16-year-olds are weekly drinkers, 47% of 15-year-olds and 59% of 16-year-olds reported having ever been drunk. The study also showed a steady increase in lifetime and last-month use of alcohol among 13–16-year-olds since 2002, but did not report major changes in drunkenness.2

It appears that children have little difficulty procuring alcohol even though it is illegal for those under 18 to buy alcohol. According to the ESPAD survey of 2007, 27% of 15–16-year old boys purchased beer in an off-premise in the 30 days prior to the survey and 27% of girls had purchased spirits. The same study reported that lifetime alcohol use among 15–16-year-olds decreased from 76% in 2003 to 53% in 2007. It also reported that 53% had ever been drunk and that the proportion of who reported having been drunk at least 10 times decreased from 41% to 17%.3 While it may be that there was a real decrease in alcohol use (a similar decrease was also observed for cannabis) reported in the ESPAD survey of 2007; it may also be that this decrease was due to a change in the profile (age, gender or socio-economic group) of the sample chosen, or in the way the questionnaire was administered. In spite of these reported changes, one in five of Irish 16-year-olds are weekly drinkers and more than half of 15–16-year-olds have ever been drunk, which is a cause for concern given the illegal status of alcohol among this group and the vulnerability of the developing teenage brain to alcohol-related damage.

**Overview of alcohol marketing practices**

The alcohol industry promotes its products using an integrated mix of marketing strategies and media.

* Marketing at the place of sale has become increasingly important with an expansion of alcohol sales into more retail outlets. This often goes hand in hand with pricing promotions. Promotion of alcohol brands in electronic media is a major part of marketing.
* Advertising is also shown in cinemas and this is increasingly supplemented by product placement in movies and television programmes.
* Newer forms of electronic communication such as internet networking sites, e-mail and mobile phones have also provided new opportunities for alcohol promotion which are popular with young people. They provide opportunities for viral marketing in which young people transmit marketing material on to peer networks.

Irish research reported that 16 different communication channels were documented by young people where they were exposed to alcohol marketing practices – the most commonly mentioned being television, magazines/newspapers, internet, street flyers, billboards and supermarkets/shops.

* Integrated marketing was common. Two-thirds of the young people reported they had seen the same alcohol products in other media channels.
* One in every four of the alcohol marketing practices recorded involved a price promotion such as special offers, free alcohol, volume sales and deep discounts with street flyers and supermarkets the main channels of communication.4

These Irish findings are consistent with international literature.5

There is a growing trend for marketing to shift away from traditional forms of direct advertising in the print and broadcast media (known as ‘above-the-line’ activity) to ‘below-the-line’ activity, such as sponsorship, competitions, special promotions and an increased focus on new media online and via mobile phones.

**The target audience in relation to alcohol marketing**

Despite the breadth of the marketing mix, the opportunities being utilised are mostly targeted to a younger segment of the population which often invisible to other segments of the population. Analysis of alcohol industry documents relating to 2005–2008 by Hastings and colleagues (2010)6 reveal that many references are made in the documents to the need to recruit new drinkers and establish their loyalty to a particular brand, for example, WKD wants to attract *‘new 18 year olds’*, Smirnoff Ice wants to *‘become the most respected youth brand’*. Market research data on 15 and 16 year olds are used to guide campaign development and deployment and it is clearly acknowledged that particular products appeal to children; Lambrini, for instance is referred to as a *‘kids drink’*. University students are another focus. A Smirnoff presentation says a *‘great place to create excitement and drive recruitment is within the student community’* and Carling wanted a *‘greater focus on students as a core recruitment audience’*.

These documents are full of references to alcohol enhancing the social success of either an individual or an event. Carling is described as a ‘*social glue’* by its promotion team and the most important message for WKD to convey is that the brand *‘is all about having a laugh with your mates’*. Lambrini *can ‘transform you into the glamour pusses you know you should be’*. The need to *‘communicate maleness and personality’* is noted as a key communications objective for WKD, and Diageo highlights the brand values and personality of Smirnoff Black as *‘urbane’*, *‘masculine’*, and *‘charismatic’*.

**The marketing message in relation to alcohol**

The current advertising of alcohol rarely concerns the product itself, but normally focuses on the image of a brand. Especially for young target groups who drink the most and constitute the future body of customers, the product has become subservient to the image.

Alcohol marketing communicates a legitimacy and status to alcohol that belies the harms associated with its use.

Alcohol marketing and promotion therefore influences social norms, and there is substantial evidence that these in turn influence young people’s relationship with alcohol. The more common and acceptable young people think drinking is, both in society as a whole and among their peers, the more likely they are to be a drinker and to consume greater quantities of alcohol.7-10

**The uptake of the alcohol marketing message by young people**

Children are aware of alcohol advertisements and this awareness increases with age. Children have been found to identify alcohol advertisements as their favourite advertisements. Liking of alcohol advertisements has, in turn, been linked to alcohol consumption among young people. Brain imaging research has found that adolescents with alcohol use disorders showed greater brain activation in response to alcohol advertisements, especially in areas linked with reward, desire and positive affect compared to other infrequent adolescent drinkers. The highest degree of brain response was in youths who consumed more drinks per month and reported greater desires to drink.11

Numerous studies found evidence of the importance of alcohol advertising in shaping youth attitudes, perceptions and expectancies about alcohol use, which then influence youth decisions to drink. Their findings include:

* Young peoples’ appreciation of portrayals in alcohol advertising is positively related to their desire to emulate the people and lifestyle featured in the advertisements.12
* In Ireland, the elements of the alcohol marketing practices that particularly appealed to young people were humour, cleverness, cheap/free alcohol and attractiveness.4
* Young people like elements of humour and story, and these elements significantly contribute to the overall likeability of specific advertisements, and then to greater likelihood of intent to purchase the product and brand advertised.13
* Adolescents progressively internalise messages about alcohol and these messages affect their drinking behaviours. Subjects who watched more primetime television found portrayals of alcohol in alcohol advertising more desirable, and showed greater desire to emulate the person in the ads. These were associated with more positive expectancies about alcohol use, which then positively predicted liking beer brands as well as alcohol use.14
* Masculinity is a dominant image in beer advertising. The effectiveness of linking masculinity with sports was demonstrated in a US study of male teenagers who consistently preferred televised beer advertisements with sport content, compared with those without.15
* Research from the UK on 13–15-year-olds revealed a sophisticated level of awareness of, and involvement in, alcohol marketing across several channels. The use of humour in marketing was considered appealing and the key issues in brand selection were image, strength and value for money.16

Content analysis of advertising show little portrayal of harmful consequences of drinking.17 Research has also shown that advertisements without reference to image or lifestyle are less attractive (and therefore likely to be less effective) to young people.18 Young people are not interested in alcohol advertising stressing product attributes or discouraging underage drinking, and exposure to these is associated with less desire to purchase the product.13 This is reiterated by the CEO of Asia Pacific Breweries *‘A beer is a beer is a beer…So therefore it is all about brands…We are not selling beer, we are selling image’.*19

**The impact of alcohol advertising on young people**

The strongest evidence on the impact of alcohol advertising to date comes from a recent systematic review of longitudinal studies.20 This review analysed 13 studies and had a total sample size of over 38,000; 12 of the 13 studies found evidence that exposure to alcohol advertising and promotion predicts both the onset of drinking among non-drinkers and increased levels of consumption among existing drinkers. The other study found an impact of exposure on intentions to drink in the next month. Longitudinal studies are the highest level of evidence available to study the effects of alcohol because they include a dimension of time and are given priority over cross-sectional studies in untangling cause and effect.

Among the findings of these longitudinal studies:

* Young people who had established a relationship with a brand of beer by the age of 18 years were found to be heavier drinkers and self reported more alcohol-related aggressive behaviour at the age of 21.21
* In markets with greater availability of alcohol advertising, youth were more likely to continue to increase their drinking as they moved into their mid-20s while drinking declined after age 23 in markets with less alcohol advertising, even when controlling for alcohol sales at market level.22
* Young people who were more receptive to alcohol marketing were 77% more likely to have initiated drinking at follow-up, and 75% more likely to be current drinkers at follow up compared to young people who were non receptive to alcohol marketing.23
* Exposure to outdoor advertising for alcohol around schools was associated with intentions to drink, even among non-drinking students, suggesting that those who are not yet using alcohol are also affected by alcohol advertising.24
* Young people who owned alcohol-branded merchandise were significantly more likely to have started to drink alcohol compared with students who did not own any such merchandise.25
* Young people who liked watching alcohol advertising not only believed that positive consequences of drinking were more likely, but were also more likely to believe that their peers drank more frequently, and that their peers approved more of drinking. All these beliefs interacted to produce greater likelihood of drinking or of intention to drink within the next year.13
* Exposure to in-store beer displays predicts drinking onset and exposure to alcohol ads in magazines or beer concession stands at sports or music events predicts greater frequency of drinking.26
* Frequent promotions and advertisements at both on- and off-premise establishments were associated with higher binge drinking rates on the college campuses.27

Nonetheless, cross-sectional studies have also consistently reported correlations between increased exposure and greater likelihood of current drinking. Structural equation modelling has demonstrated that the cross-sectional data fit a model in which advertising increases consumption rather than the reverse.

Findings of other studies include:

* A study on US college students found that repeated exposure to beer advertising resulted in perceptions of alcohol as more beneficial and less risky compared with students not exposed.28
* Students reported more positive assessments of the benefits of beer following exposure to beer advertising15
* A number of cross sectional surveys have shown associations between the survey respondents’ reports of exposure to alcohol advertising and their expectations of future drinking (in the case of the younger respondents), positive beliefs about drinking and/or self-reported drinking itself.29-31
* In a German study, exposure to movie alcohol use was associated with greater likelihood of binge drinking and of drinking without parental knowledge.32
* In the UK, among 12–14-year-olds, involvement with, and awareness of alcohol marketing was predictive of both uptake of drinking and increased frequency of drinking two years later.33
* Irish adolescents were strongly attracted to alcohol advertisements and this played a role in their beliefs, expectations and knowledge about alcohol use and for some, especially girls, they were a source of encouragement to drink, with the most vulnerable group those who were aged 12–14 years.34

Alcohol advertising is more likely to impact on teenagers compared to those in their 20s. A US study comparing young people aged 15–20 with young adults 21–29 found that while exposure to alcohol advertising shaped attitudes and perceptions about alcohol use among both groups, these attitudes and perceptions predicted only the 15–20-year olds positive expectancies about alcohol and intentions to drink, but did not affect the young adults’ expectancies and alcohol consumption.35

Although there has been no Irish quantitative research that measures the impact of alcohol advertising on young people and their decision to drink, the existing qualitative Irish research corroborates the international evidence.

**Limitations of using econometric methods to measure the effect advertising spend on total per capita consumption**

Econometric methods look for an impact on total population consumption by using advertising spend as a proxy for changing levels of exposure to advertising. These methods have not consistently found a clear relationship between alcohol spend and consumption. These methods are limited for a number of reasons:

* Expenditure on the measured media (usually broadcast and print) is known to have been an underestimation of the marketing effort even prior to the development of the new market techniques.36
* The limited impacts of alcohol advertising shown in econometric studies may reflect the diminishing marginal effect of additional advertising expenditure in markets already saturated with both alcohol products and marketing.37
* In addition, given the known sensitivity of young people to marketing, and the focus of most econometric studies on the total population, it is likely that important effects of advertising on young people have been missed by econometric studies.38 Similar critiques have been made and similar inconsistencies found in econometric analyses in relation to tobacco advertising.39
* Longitudinal research has also shown that the impact of exposure to alcohol advertising is cumulative, which helps to explain the failure of earlier experimental studies to produce clear results.22

Measures of the overall amount of advertising do not necessarily give an accurate picture of youth exposure. This does not mean that alcohol does not affect young people. It may just reflect inadequate research methods.

In light of these limitations, more sophisticated methods are now being used to measure the impact of alcohol advertising, for example, longitudinal studies which have been discussed above and have shown that alcohol advertising clearly has an impact on children’s alcohol use.

**The link between alcohol sponsorship and harmful use of alcohol**

Sports sponsorship by the alcohol industry provides an opportunity to build the alcohol brand into the name of the event through mention in sports commentaries, signage on clothing and sports grounds, and products retailed to fans. In the UK, alcoholic drinks companies were the second largest source of sponsorship from 2003 to 2006.40 Irish data are not available. Marketing through sports sponsorship attracts young males, the group most likely to be heavier drinkers. It also accesses audiences when they are most receptive to learning about a product – while they are having a good time at an exciting branded event. Many sports events are also family affairs, and alcohol ‘impressions’ are also made on young people, helping form in adolescence the attitudes and preferences that are taken on into later life.

Research has shown that young people have a particularly high awareness of, and exposure to, sports sponsorship.16 Events are chosen to show how well the brand understands and relates to young people: as one Carling executive expresses it, *‘They (young men) think about four things, we brew one and sponsor two of them’*.6

In a New Zealand study of over 1200 sports players ranging from social players to provincial/national competitors, alcohol sponsorship was reported by 48%. Those who received sponsorship at the individual, team and club level were more likely to be hazardous drinkers and had an average AUDIT score 2.4 points higher than those who received no sponsorship.41

**Overview of alcohol advertising regulatory systems and the Irish Voluntary Code**

The studies of liking for, and exposure to, alcohol advertising and the impacts on attitudes and behaviours of young people described have been carried out in countries with industry codes of content in place. Most of this research comes from the USA, with some studies from New Zealand, and more recently Belgium and Germany. This substantial body of research has shown that, even if alcohol marketing remains in line with codes on alcohol advertising content, it nevertheless encourages drinking and has an impact on younger people’s beliefs and alcohol consumption levels.

In Ireland the existing co-regulatory codes state that their purpose is ‘*to reduce the exposure of young people to alcohol advertising and marketing in Ireland. The codes also aim to limit the overall level of alcohol advertising and sponsorship across all media in Ireland.’*

In spite of this stated aim there is no mention in the codes of targets relating to reductions in alcohol advertising and no timeframe is given. To improve the effectiveness of the existing codes, their impact could be measured by demonstrating change in the above, that is, they could measure the number of alcohol advertisements that the average young person is exposed to, which currently they do not measure. Instead, the codes simply measure adherence to initiatives which may or may not have any impact on the exposure of children to advertising. The codes could also measure changes in childrens’ awareness of alcohol brands to demonstrate if children were indeed being protected from exposure to advertising.

In the Codes no alcohol advertisements are allowed on television or radio where more than 25% of the audience is under 18. This means that it is acceptable to allow up to 25% of children to be exposed to alcohol advertising so if a match has an audience of one million, according to the codes up to 250,000 children may be watching. This is a substantial number of a vulnerable population being unnecessarily exposed to risk. If audience profiling was used to calculate a cut off of 25% then it would be more appropriate to set a cut off of 11% as this is the per capita of those aged 10–17 years in the population and this is the group of people most likely to be influenced by alcohol advertising.

In relation to other types of advertising, no alcohol ads are permitted within 100 metres of a school entrance, however, they can be placed at youth leisure events or facilities where many children frequent. Wraparounds covering the entire bus, train or shelter are not allowed but alcohol ads can take up to 25% of the available space. This means that buses, trains and bus shelters can continue to carry adverts on the public transport system that children use everyday to travel to school.

A number of limitations hinder the existing codes effectiveness in achieving their stated purpose:

* There is no legislative framework.
* No attention is given to the total amount of alcohol advertising.
* They fail to provide effective cover for all forms of alcohol marketing such as new media and sponsorship
* There are no controls in place over the increasingly common branded events which merge alcohol brands with key aspects of youth culture. During the radio watershed, a cultural/music event can be advertised with an alcohol brand in the title, for example, Absolut Fringe, Jameson Dublin International Film Festival, as this does not constitute alcohol marketing under the existing codes. It is advertising an event.
* They fail to act as a suitable deterrent to bad marketing practices as a consequence of weak enforcement and lack of stringent penalties. If a breach is upheld there is no penalty, the drinks company or advertiser is simply asked to remove the offending promotion.
* The reliance on public complaint is of limited effectiveness, especially in an increasingly fragmented media market place. In many instances, young people will be the only ones to be aware of marketing and promotions, and they are unlikely to be a critical audience. For example, parents may not know what advertising is reaching their children through social networking sites like Facebook and Bebo.

**Conclusion**

Children are especially attracted to alcohol advertising with humour, cleverness and cheapness the elements that they find appealing. Robust research evidence in the form of longitudinal studies shows that exposure to alcohol advertising and promotion predicts both the onset of drinking among non-drinkers and increased levels of consumption among existing drinkers.

Alcohol is a psychoactive drug and children are particularly susceptible to its harms. Alcohol exerts a greater toll on the brain development of those aged under 21 than on any other age group and this has been confirmed by MRI (Magnetic Resonance Imaging) research.42 Children who begin drinking before the age of 15 are four times more likely to develop alcohol dependence at some time in their lives than those who have their first drink at age 20 or older.43

It is therefore imperative that every effort is made to delay the onset of drinking among this vulnerable group. While there are numerous factors that influence children in relation to their decision to commence drinking, the research evidence presented here clearly shows that alcohol advertising is a factor and it is one that can be controlled by policy interventions.

The Irish voluntary codes in relation to alcohol advertising have a number of weaknesses and do nothing to measure the exposure of young people to alcohol advertising. There is no evidence to suggest that these codes have had any impact in reducing the exposure of children to alcohol advertising.

**References**

1. Office of Tobacco Control (2006) *Children, Youth and Tobacco: Behaviour, Perceptions and Public Attitudes*. Naas: Office of Tobacco Control.

2. Doyle P, Molcho M, and Nic Gabhainn S (2009) *HBSC Ireland: age related patterns in alcohol consumption and cannabis use among Irish children between 1998-2006. Short report.* Galway: Health Promotion Research Centre, National University of Ireland.

3. Hibell B, Guttormsson U, Ahlström S, Balakireva O, Bjarnason T, Kokkevi A*, et al.* (2009) *The 2007 ESPAD report: substance use among students in 35 European countries*. Stockholm: The Swedish Council for Information on Alcohol and Other Drugs (CAN) and the Pompidou Group of the Council of Europe.

4. National Youth Council of Ireland (2009) *Get 'em young: Mapping young people's exposure to alcohol marketing in Ireland*. Dublin: NYCI.

5. Jernigan D (2001) *Global status report: alcohol and young people*. Geneva: World Health Organization.

6. Hastings G, Brooks O, Stead M, Angus K, Anker T, and Farrell T (2010) Failure of self regulation of UK alcohol advertising *Bmj*. 340: b5650.

7. Labrie JW, Cail J, Hummer JF, Lac A, and Neighbors C (2009) What men want: the role of reflective opposite-sex normative preferences in alcohol use among college women*.* *Psychol Addict Behav*. 23: 157-62.

8. LaBrie JW, Hummer JF, Neighbors C, and Pedersen ER (2008) Live interactive group-specific normative feedback reduces misperceptions and drinking in college students: a randomized cluster trial*.* *Psychol Addict Behav*. 22: 141-8.

9. Neighbors C, Lee CM, Lewis MA, Fossos N, and Larimer ME (2007) Are social norms the best predictor of outcomes among heavy-drinking college students? *J Stud Alcohol Drugs*. 68: 556-65.

10. Perkins HW (2007) Misperceptions of peer drinking norms in Canada: another look at the "reign of error" and its consequences among college students*.* *Addict Behav*. 32: 2645-56.

11. Tapert SF, Cheung EH, Brown GG, Frank LR, Paulus MP, Schweinsburg AD*, et al.* (2003) Neural response to alcohol stimuli in adolescents with alcohol use disorder*.* *Arch Gen Psychiatry*. 60: 727-35.

12. Austin EW and Knaus C (2000) Predicting the potential for risky behavior among those "too young" to drink as the result of appealing advertising*.* *J Health Commun*. 5: 13-27.

13. Chen MJ, Grube JW, Bersamin M, Waiters E, and Keefe DB (2005) Alcohol advertising: what makes it attractive to youth? *J Health Commun*. 10: 553-65.

14. Austin EW, Chen MJ, and Grube JW (2006) How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticism*.* *J Adolesc Health*. 38: 376-84.

15. Slater MD and Domenech MM (1995) Alcohol warnings in TV beer advertisements*.* *J Stud Alcohol*. 56: 361-7.

16. Gordon R, Moodie C, Eadie D, and Hastings G (2010) Critical social marketing - The impact of alcohol marketing on youth drinking: Qualitative findings*.* *International Journal of Nonprofit and Voluntary Sector Marketing*. 15: 267-275.

17. DeFoe JR and Breed W (1979) The problem of alcohol advertisements in college newspapers*.* *J Am Coll Health Assoc*. 27: 195-9.

18. Kelly K, Slater M, and Karan D (2002) Image Advertisements’ Influence on Adolescents’ Perceptions of the Desirability of Beer and Cigarettes*.* *Journal of Public Policy & Marketing*. 21: 295-304.

19. Jernigan D (1997) *Thirsting for markets*. San Rafael, CA: Marin Institute.

20. Anderson P, de Bruijn A, Angus K, Gordon R, and Hastings G (2009) Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies*.* *Alcohol Alcohol*. 44: 229-43.

21. Casswell S and Zhang JF (1998) Impact of liking for advertising and brand allegiance on drinking and alcohol-related aggression: a longitudinal study*.* *Addiction*. 93: 1209-17.

22. Snyder LB, Milici FF, Slater M, Sun H, and Strizhakova Y (2006) Effects of alcohol advertising exposure on drinking among youth*.* *Arch Pediatr Adolesc Med*. 160: 18-24.

23. Henriksen L, Feighery EC, Schleicher NC, and Fortmann SP (2008) Receptivity to alcohol marketing predicts initiation of alcohol use*.* *J Adolesc Health*. 42: 28-35.

24. Pasch KE, Komro KA, Perry CL, Hearst MO, and Farbakhsh K (2007) Outdoor alcohol advertising near schools: what does it advertise and how is it related to intentions and use of alcohol among young adolescents? *J Stud Alcohol Drugs*. 68: 587-96.

25. McClure AC, Dal Cin S, Gibson J, and Sargent JD (2006) Ownership of alcohol-branded merchandise and initiation of teen drinking*.* *Am J Prev Med*. 30: 277-83.

26. Ellickson PL, Collins RL, Hambarsoomians K, and McCaffrey DF (2005) Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment*. Addiction* 100: 235-246.

27. Kuo M, Wechsler H, Greenberg P, and Lee H (2003) The marketing of alcohol to college students: the role of low prices and special promotions*.* *Am J Prev Med*. 25: 204-11.

28. Snyder L and Blood D (1992) Caution: Alcohol advertising and the Surgeon General’s warnings may have adverse effects on young adults*.* *Journal of Applied Communication Research*. 20: 37-53.

29. Wyllie A, Zhang JF, and Casswell S (1998) Positive responses to televised beer advertisements associated with drinking and problems reported by 18 to 29-year-olds*.* *Addiction*. 93: 749-60.

30. Wyllie A, Zhang JF, and Casswell S (1998) Responses to televised alcohol advertisements associated with drinking behaviour of 10-17-year-olds*.* *Addiction*. 93: 361-71.

31. Grube JW and Wallack L (1994) Television beer advertising and drinking knowledge, beliefs, and intentions among schoolchildren*.* *Am J Public Health*. 84: 254-9.

32. Hanewinkel R, Tanski SE, and Sargent JD (2007) Exposure to alcohol use in motion pictures and teen drinking in Germany*.* *Int J Epidemiol*. 36: 1068-77.

33. Gordon R, Mackintosh AM, and Moodie C (2010) The Impact of Alcohol Marketing on Youth Drinking Behaviour: A Two-stage Cohort Study*.* *Alcohol Alcohol.* 45: 470–80.

34. Dring C and Hope A (2001) *The Impact of Alcohol Advertising on Teenagers in Ireland*. Dublin: Department of Health and Children.

35. Fleming K, Thorson E, and Atkin CK (2004) Alcohol advertising exposure and perceptions: links with alcohol expectancies and intentions to drink or drinking in underaged youth and young adults*.* *J Health Commun*. 9: 3-29.

36. Stewart D and Rice R. (1995) Non-traditional media and promotions in the marketing of alcoholic beverages. In: Martin SE and Mail P(eds), *The effects of the mass media on the use and abuse of alcohol*. Bethesda, MD: US Department of health and human services.

37. Saffer H (1998) Economic Issues in Alcohol and Cigarette Advertising*.* *Journal of Drug Issues* 28: 781-793.

38. Hastings G, Anderson S, Cooke E, and Gordon R (2005) Alcohol marketing and young people's drinking: a review of the research*.* *J Public Health Policy*. 26: 296-311.

39. Hoek J (2004) Tobacco promotion restrictions: ironies and unintended consequences*.* *Journal of Business Research*. 57: 1250-1257.

40. BMA Board of Science (2008) *Alcohol misuse: tackling the UK epidemic*. London: British Medical Association.

41. O'Brien KS and Kypri K (2008) Alcohol industry sponsorship and hazardous drinking among sportspeople*.* *Addiction*. 103: 1961-6.

42. American Medical Association (AMA) (2002) *Harmful consequences of alcohol use on the brains of children, adolescents and college students*.

43. Grant BF and Dawson DA (1997) Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: results from the National Longitudinal Alcohol Epidemiologic Survey*.* *Journal of Substance Abuse*. 9: 103-10.