



Report on youth exposure to alcohol commercials on television in Europe:

Volume of youth exposure in Bulgaria

Results of monitoring televised alcohol commercials in Bulgaria in 2010

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Summary

Background

The past few years, the evidence base has grown stronger that exposure to not only the content, but especially the *volume* of alcohol advertising has an (undesirable) impact on the drinking behaviour of youngsters. The evidence suggests that exposure to alcohol advertising has undesirable effects including earlier initiation of drinking and more frequent drinking. While many studies contrast those with high volumes of exposure with low volumes of exposure, the results do not indicate that you need to be exposed to “large volumes” – this is simply the causal contrast the researchers have used to estimate the effects. These effects of alcohol advertising have been found in the *long term* (longitudinal studies; see Anderson et al., 2009 and Smith & Foxcroft, 2009 for reviews) as well as in the *short term* (experimental studies, see e.g. Engels et al., 2009; Koordeman et al., 2011a; 2011b; 2011c).

This report has been written for the AMMIE project. The AMMIE project (Alcohol Marketing in Europe) was started in 2009 as alcohol marketing was not yet monitored systematically and independent from commercial interest in most of the European Member States although the topic is an important one in the EU Alcohol Strategy. Within the AMMIE project, NGOs from five EU countries (Bulgaria, Denmark, Germany, Italy and the Netherlands) have monitored alcohol marketing following a method developed by the Dutch institute for alcohol policy. The results of this project will give insight in the overall presence of alcohol marketing in the five countries and describe the content and the amount of alcohol advertising, with special attention to the opinion and exposure of young people. Furthermore, the project will describe the functioning of the alcohol marketing regulation systems; this will lead to recommendations to improve the regulatory system in order to protect young people against the harmful influence of alcohol advertising.

The present report focuses on the exposure of underage youth to alcohol advertising on television in Bulgaria in 2010.

I) Method

Via Nielsen Media data on alcohol commercials were bought. The data concerned the Top 3 TV channels watched most by children aged 13 – 17 and that were allowed to broadcast alcohol advertisements. Data covered the months May and October 2010. Based on this selection several analyses were run, e.g. on the characteristics of the data, the exposure of certain age groups, the adherence to the 30% threshold from the Advertising Code for Alcoholic Beverages (strictly speaking, it was introduced in Bulgaria in November, 2010, after the two months presented in the report) and finally the possible effects of the implementation of a stricter (self-regulatory) percentage threshold or an extension of the existing watershed.

The analyses followed a specially developed protocol and all analyses and results were double checked by the Dutch Institute for Alcohol Policy Johns Hopkins Bloomberg School of Public Health resp. Virtual Media Resources, Inc., Natick, Massachusetts in the United States. Below, the findings of these analyses are summarized. Below, the findings of these analyses are summarized.

II) Results

Characteristics

A total of 2.119 alcohol commercials were broadcast in May and October 2010 on the Top 3 TV channels most watched by 13-17 year olds. Most advertising occurred in May (N = 1.794). The favorite day for alcohol advertising appears to be Sunday. The largest amounts were advertised between 18:00 and 1.00h. The majority (90.0% in May, and 93.5% in October) of Bulgarian alcohol commercials are for beer, followed by wine (9,3% in May), and spirits (0,7% in May, and 6,5% in October). No advertising was found for sweet beverages. A total of 13 different producers of alcoholic beverages were active in May and October. Together they advertised for 25 different brands. In May most commercials were broadcast by Zagorka PLC (N = 557; 31,0% of the total number of ads registered in that month), followed by Carlsberg (N = 454; 25,3% of the total number of ads registered in that month). In October most commercials were broadcast by Carlsberg (N = 158; 48,6% of the total number of ads registered in that month), followed Kamenitza PLC (N = 71; 21,8% of the total number of ads registered in that month).

Exposure to alcohol advertising

Taken together, the data on the exposure to alcohol advertising on television on the Top 3 channels in May and October 2010 reveals that 93,4% of all advertising was seen by adults (18+), whereas minors (4-17) saw 6,6% of all advertising. Of all alcohol advertising impressions seen by minors, 3,2% was seen by the youngest age group (4-12) and 3,4% was seen by the 'older' minors (13-17). On average, most alcohol ads were seen by adults of 35 years and older (on average 93 alcohol commercials per person), followed by young adults (18-34) who saw on average 55,3 alcohol ads per person. A child aged 4-12 saw on average 31,4 alcohol commercials, while the 'at risk' group of 13-17 (just starting to drink), saw on average 46,8 alcohol commercials per youngster.

The average number of 46,8 ads seen by youngsters aged 13-17, who are not legally allowed to buy alcohol, is closer to the average of 55,3 ads seen by the young adults (aged 18-34) than to the average of 31,4 ads seen by the youngest children (aged 4-12).

There was little evidence for youth 'overexposure' in general. In other words on a per capita basis youth did not receive significantly more exposure to alcohol commercials compared with (young) adults. The GRP ratios¹ of 0,57 resp. 0,85 indicate that 13-17 year olds are not relatively more

¹ GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within a certain age group divided by the number of possible viewers (television universe) within this same age group *100.

exposed to alcohol advertising compared to adults (18+) resp. young adults (18-34). There were also no indications that specific types of beverages were overexposing youth. The GRP ratios for beer, wine, sweet beverages and spirits were below 1.

Finally, on the brand level, 1 out of 25 brands was found to overexpose youth (13-17) relative to adults (18+). The GRP ratio of 1,23 found for Carlsberg beer indicates that youth were seeing 23% more advertising for the beer brand than adults, on a per capita basis.

In more than one fifth of the 2.119 alcohol commercials youth aged 13-17 turned out to be relatively overexposed compared with adults (that is, more minors were reached in relation to the size of the own age group, compared with adults in relation to the size of this age group). In 22,0% of all commercials being broadcast relatively more 13-17 year olds were reached compared with adults (18+). This percentage of overexposure was slightly higher when the youngsters were compared with young adults aged 18-34: 32,0% of the commercials exposed relatively more 13-17 year olds.

Self-regulatory 30% threshold

The alcohol advertisers included a so called ‘30% threshold’ in their voluntary codes in order to prevent too many minors from being reached by alcohol advertising. This threshold was introduced in Bulgaria on the 4th of November, 2010, which means it does not cover the two investigated months in this report (May and October, 2010). However, the European Forum for Responsible Drinking (EFRD) and The European Advertising Standards Alliance (EASA) had already implemented the 30% self-regulatory threshold on EU level. Although it should be enforced, we found 16 violations of the 30% threshold in May and October.

Several issues regarding this threshold deserve to be mentioned. First, the 30% standard has been based on the U.S. population, which consists of more minors than the European populations and is therefore not applicable in Europe. Second, the 30% standard still allows large absolute numbers of minors to be reached, while the Code is not being violated. In other words, low percentages, *not* violating the threshold can be much more harmful than (very) high percentages which are violating the 30% threshold (but in fact reach low absolute numbers of minors). Third, the 30% standard is not proportional to the ‘at risk’ youth population (aged 13-17) who are starting to drink, are more sensitive to advertising and see more ads.

A ‘proportional’ standard has been recommended by several health organizations, scientists and state attorneys general in the U.S. (see e.g. CAMY, 2005; Jernigan & Ross, 2010; National Research Council and Institute of Medicine, 2004; FTC, 2006). The 30% standard regarding ‘all minors’ allows the alcohol advertisers to relatively overexpose the 13-17 year olds, compared with the 4-12 year olds.

GRP ratio = the total number of GRPs for one age group (e.g. 13-17) divided by the total number of GRPs for a second age group (e.g. adults (18+) or young adults (18-34)). A GRP ratio > 1 is an indication that youth are being exposed to more advertising per capita than (young) adults.

Therefore, a new, more proportional standard of 6% is proposed for Bulgaria. This is based on the Bulgarian 'at risk' population of 13-17 year olds which comprises 5,7% of the total TV population. The reasons for introducing this new standard are similar with those, supporting the 15% proportional standard that is being advocated for in the U.S. - which is based on the size of the 12-20 age group on the total U.S. population.

Time bans

In a number of countries in Europe, unlike the U.S., legal time restrictions on alcohol advertising are currently in place. A majority of 21 out of 27 EU Member States have time and/or product bans for alcohol advertising on television. Since it is unclear what might happen with the pattern of broadcasting after a watershed comes into force, it is difficult to do firm 'predictions' on the exact effect of a time ban (advertising shifts might occur *after* the time ban). At the moment, Bulgaria has a statutory ban on indirect marketing of spirits before 22.00. The time of advertising of products like beer and wine is not restricted. However, our research showed numerous violations of the statutory regulations: 78 advertisements of spirits were broadcast before 22:00h. or after 06:00h. in May and October on the 3 monitored channels most watched by youngsters (bTV, Nova and Diema Family): all ads were of Yambol Grape (product of Vinprom Peshtera).

Data suggests that extending the Bulgarian time ban for indirect advertisements of spirits before 22.00h to at all kinds of alcohol would have a counter effective effect on youth exposure when assuming that alcohol producers compensate for the loss in adult GRPs. A total ban on alcohol advertising on television would reduce the exposure to zero, being the best protector against youth exposure.

Combination of proportional standard and time ban

A possible disadvantage of implementing a time ban in separation of other measures is the fact that a small high risk group of youngsters is still watching late night television without parental control. Research has shown that this is a risk factor for the initiation of (harmful) drinking. For this reason, ideally, a time ban is combined with a proportional standard, to prevent alcohol advertising around programs with a high youth audience composition.

The Bulgarian data reveal that combining a 6% proportional standard with a time ban generates the largest effects in preventing youth exposure. The combination of an 6% standard with a ban until 23.00 can cut youth exposure with around 16% (from 4.680 youth GRPs to 3.926), while the number of generated adult GRPs remains the same as before the introduction of the combined policy.

III) Conclusions and Recommendations

The above mentioned results of the Dutch data lead to several recommendations in order to better protect minors against the harmful effects of alcohol advertising. The recommendations are summarized below:

- ***The 30% threshold adopted in existing self-regulation codes is generally ineffective;***
- ***Extending the statutory time ban would not decrease youth exposure to televised alcohol advertising when assuming that alcohol producers will compensate for the loss in adult GRPs.*** Therefore, a moral appeal on the alcohol producing sector should be made to urge them not to increase the volume of alcohol advertisements at the hours outside the timeslot.
- ***Combine a proportional standard of 6% with a statutory time ban (until 1h) can theoretically cut youth exposure in half (46%)*** while the number of generated adult GRPs remains the same as before the introduction of the combined policy. However, in practice a proportional standard will be ineffective due to its implementation in self-regulation, its difficulty to monitor and to enforce.
- ***Implement a total ban on alcohol advertising.*** As mentioned in the Draft Version (26 April 2011) of the WHO European Alcohol Action Plan for 2012-2020, one can progressively work towards a total ban on alcohol advertising. Given the undesirable impact of alcohol advertising on the drinking behaviour of youth, the knowledge that alcohol is a carcinogenic and addictive substance (technically it is a hard drug) and the harm it causes to society, a total ban on advertising for this product will be entirely justified.
- ***Continue the monitoring of alcohol marketing.*** In the Council Conclusions on Alcohol and Health of the Council of the European Union (2009) it is stated that: The Council of the European Union invites the member states to: “*Ensure that, where in place, self-regulatory standards and codes are developed, implemented and monitored in collaboration with health-promoting entities*” (p. 5). Also the WHO Action Plan 2012-2020 (Draft version, 26 April 2011) states that: “*Monitoring of alcohol marketing practices is best done when it is the responsibility of an independent body or a government agency, and when it is performed systematically and routinely*”. The continuation of independent monitoring of alcohol marketing is therefore highly recommended.

1. Introduction

The effects of alcohol advertising and marketing on drinking behavior of young people has been more and more extensively studied over the past few years. The evidence base has grown stronger that especially exposure to large *volumes* of alcohol advertising has an undesirable impact on the drinking behaviour of youngsters. These effects of alcohol advertising on drinking behaviour have been found on the *long term* (longitudinal studies) as well as on the *short term* (experimental studies). Both types of research (findings) will be discussed below, followed by the Bulgarian regulations with regard to the volume of alcohol advertising. The chapter will conclude with the main questions that we will try to answer in this report.

1.1 Effects of alcohol advertising

1.1.1 Effects of alcohol advertising on the long term

An increasing amount of scientific studies is being conducted on the impact of exposure to alcohol marketing on youth drinking behaviour. Recent longitudinal studies found convincing evidence of a causal relationship between the exposure to alcohol marketing practices and the drinking behaviour of young people (Anderson et al., 2009; Smith & Foxcroft, 2009).

Anderson et al. (2009) reviewed thirteen longitudinal studies, mostly conducted in New Zealand, Australia and the United States, in which a total of over 38.000 youngsters aged 10-21 were followed over time. The studies estimated the exposure to advertising and promotion in various ways, including estimates of the volume exposure of media and advertising, ownership of branded merchandise, recall and receptivity, and expenditures on advertisements. Twelve of the thirteen studies found an impact of exposure to alcohol marketing practices on subsequent alcohol use, including initiation of drinking and heavier drinking amongst existing drinkers. The thirteenth study found an effect on the intention to drink (Pasch et al., 2007). The strength of the impact differed between the studies, but the review showed that there is conclusive evidence that exposure to alcohol marketing is associated with the initiation of alcohol use and with increased drinking among already drinkers.

To illustrate some of the findings of the longitudinal studies, below some examples are provided:

- 12-year olds who are highly exposed to overall alcohol advertising (75th percentile) are 50% more likely to start drinking a year later compared to 12 year olds who are lightly exposed to alcohol advertising (25th percentile). (longitudinal study, Collins et al., 2007).
- Youngsters who watch 60% more alcohol advertisements on television than average are 44% more likely to have ever used beer, 34% more likely to have ever used wine/hard liquor and 26% more likely to have ever used 3 or more drinks during 1 occasion (longitudinal study, Stacy et al., 2004).

- Exposure to ‘in-store beer displays’ such as refrigerators and beer displays predicts the age of onset of drinking in non-drinking 13 year olds (longitudinal study, Ellickson et al., 2005).
- Every additional alcohol advertisement seen by youngsters increases the alcohol consumption with 1% (longitudinal study, Snyder et al., 2006).
- Youngsters who are highly exposed to alcohol commercials will drink more alcohol when they are in their twenties. However, the alcohol consumption stabilizes for youngsters who have been lightly exposed to alcohol commercials (longitudinal study, Snyder et al., 2006).
- Possession of a ‘promotional item’ such as caps, t-shirts or posters of an alcohol producer is a strong predictor of both drinking intention as well as alcohol consumption of 12-year olds (longitudinal study, Collins et al., 2007).
- Non-drinking 12 year olds who possess a promotional item of an alcohol producer or would like to have one, have a 77% higher chance of drinking one year later compared to children who are not sensitive to alcohol marketing (do not possess a promotional item and do not have a favourite alcohol brand) (longitudinal study Henriksen et al., 2008).
- Controlling for a broad range of confounding variables, it was shown that both the possession of a promotional item as well as an attitudinal susceptibility towards alcohol, predict the age of onset of drinking amongst 10-14 year olds. Also binge drinking could be predicted by these two variables. As such, alcohol branded merchandise ownership becomes a causal factor in the initiation of (binge) drinking (longitudinal study, McClure et al., 2009).

1.1.2 Behavioral studies

Besides the above mentioned longitudinal studies that consistently find effects of exposure to alcohol marketing on drinking behaviour on the longer term, several experimental (lab) studies have been conducted that show the effect of alcohol advertising on drinking behaviour on the *short term*. In these studies, conducted at the Radboud University of Nijmegen in The Netherlands, several direct effects of exposure to alcohol cues in movies and alcohol commercials were found on the drinking behaviour of adolescents. Typically, in these kind of studies adolescents in their early twenties are invited to the lab in pairs to watch a movie. They have free access to a fridge with beer, wine and sodas. The participants watch a movie interrupted by commercial breaks and do not know that their alcohol use and ‘sipping behaviour’ are being registered as main dependent variables.

The findings of these types of studies indicate that seeing alcohol cues on the screen (either in movies or in commercials) directly influences the actual drinking behaviour (Engels et al., 2009). It is hypothesized that this has to do with the more or less unconscious process of imitation of what is seen on the screen: if the main character in a movie is portrayed drinking alcohol, the participant unconsciously ‘imitates’ this behaviour and takes a sip as well (Koordeman et al., 2011c). This behaviour might very well be influenced by so called ‘mirror neurons’ in the brain. The effects seem to

be stronger in men – who usually drink more in the first place (Koordeman et al., 2011a; 2011c) and in heavier drinkers (Koordeman et al., 2011b).

Some examples of short term effects of exposure to alcohol (advertising) on drinking behaviour, found in experimental studies:

- Young men who watch a movie in which a lot of alcohol is displayed ('American Pie 2'), interrupted by commercial breaks with alcohol advertising drink twice as much alcohol during this period compared to men who see a more 'neutral' movie ('40 days and 40 nights') interrupted by neutral commercial breaks (Engels et al., 2009). This sipping behaviour seems to occur relatively 'unconsciously' (an imitation effect).
- Young men who watch the original 'alcohol' version of the movie 'What happens in Vegas', drink almost twice as much alcohol as men who watch a 'censored' version of the same movie, in which the alcohol slots had been removed (Koordeman et al., 2011a). For women, no significant effect was found. Subsequent analysis on the 'sipping behaviour' revealed that exposure to actors who were sipping in the movie, had an immediate impact on the drinking behaviour of the (male) viewers, through the mechanism of imitation (Koordeman et al., 2011c).
- Regular alcohol users (> 7 glasses per week) drink 2,5 times more alcohol in the cinema after having seen several alcohol commercials preceding the movie ('Watchmen') compared with regular alcohol users who saw several neutral commercials (Koordeman et al., 2011b). This effect was not found for the participants with a relatively low alcohol use (< 7 glasses per week).

1.1.3 Wide support

Taken together, both longitudinal studies (long term effects) as well as experimental studies (short term effects) indicate that exposure to the *amount/volume* of alcohol advertising and marketing influences youth drinking behaviour. This conclusion is supported by various scientists in this field such as associate professor David Jernigan (2008) and professor Peter Anderson (2009). It has also been confirmed by a review of Smith and Foxcroft (2009) and by the Science Group of the Alcohol and Health Forum of the European Commission (2009).

The AMMIE project (Alcohol Marketing in Europe) was started in 2009 as alcohol marketing was not yet monitored systematically and independent from commercial interest in most of the European Member States although the topic is an important one in the EU Alcohol Strategy. Within the AMMIE project, NGOs from five EU countries (Bulgaria, Denmark, Germany, Italy and the Netherlands) have monitored alcohol marketing following a method developed by the Dutch institute for alcohol policy. The results of this project will give insight in the overall presence of alcohol marketing in the five countries and describe the content and the amount of alcohol advertising, with special attention to the

opinion and exposure of young people. Furthermore, the project will describe the functioning of the alcohol marketing regulation systems; this will lead to recommendations to improve the regulatory system in order to protect young people against the harmful influence of alcohol advertising.

1.2 Bulgarian regulations on the volume of alcohol advertising

1.2.1 Statutory regulation

Before 2009 only a statutory regulation of the alcohol marketing existed in Bulgaria. It was implemented mainly according to two laws – Law on Radio and Television, and the Law on Health. In the latest version of the Law on Radio and Television from 2010 there were introduced changes in line with European legislation:

"Art. 55. (1) The direct advertising of spirit beverages shall be prohibited.

(4) The indirect advertisement of spirit beverages cannot be transmitted in radio and television programs before 22.00h."

This practically means that there can be no exposure of alcohol consumption or alcohol bottles in advertisements. Instead indirect advertisement is focused on 'positive' effects of the product on the consumer, for instance, social or sexual success.

1.2.2 Self regulation

The National Council for Self-regulation (NCSR) was created in the autumn of 2009. NCSR is a non-commercial association in public benefit. Founders are the Bulgarian Association of Advertisers (BAA), the Association of the Advertising Agencies - Bulgaria (ARA) and the Association of the Bulgarian Radio- and TV operators (ABBRO). Members of NCSR are players in the advertising industry: advertisers, agencies, media, marketing specialists and other legal entities and individuals; trade and other associations and unions that voluntarily accept the aim and statutes of NCSR. The governing body of NCSR is the General Assembly of its regular members. Its work is managed by a Managing Board, supported by a Secretariat.

To implement its objectives, the Board appoints Ethical Committee, Appeal Committee, Post Monitoring Committee, Expert Group for Code Interpretation, as well as other working structures, necessary for the achievement of the objectives of the council and the effectiveness of its work. The membership in the NCSR is voluntary. Members can be legal entities or individuals, who share the aim of the Council, accept its statutes and declare willingness to work for the implementation of its objectives. Members are regular and associated. Regular members are trade association with substantial share of the industry they play in. They participate in the work of the General Assembly and have the right to vote. They pay annual membership fee plus additional contributions to secure the financial aspects of NCSR activities. The Council can also have associated members – legal entities and sui juris individuals who share the aims of NCSR; accept its statutes; declare willingness

to work for implementation of its objectives and pay a membership fee. The National Council for Self regulation (NCSR) is an independent body for self-regulation of advertising and commercial communication in Bulgaria.

In November, 2010, a 30% threshold was introduced by the NCSR, meaning that alcohol commercials broadcast on TV should not reach a viewers audience consisting of more than 30% minors.

1.2.3 Content versus volume

Although the *content* of an ad influences the degree of attractiveness for youngsters (e.g. the use of humor, animals and celebrities has been judged as attractive, while purchase intentions decrease after seeing ads that mainly focus on product characteristics; Chen et al., 2005), the *volume or amount* of alcohol advertising that reaches minors is of an even bigger importance in influencing drinking behaviour (Anderson et al., 2009).

The ELSA project already revealed in 2007 that volume restrictions on alcohol advertising are mostly embedded in (national) statutory regulations, while content restrictions are mostly found in non-statutory regulations or self regulatory codes, that are created by the alcohol advertisers themselves (see ELSA, 'Report on Regulation').

1.3 The AMMIE project

The AMMIE project (Alcohol Marketing Monitoring in Europe) started in 2009. Although alcohol marketing is an important topic within the EU Alcohol Strategy (Commission of the European Communities, 2006), it was not yet monitored systematically and independent from commercial interests in most of the European Member States. Within the AMMIE project, NGOs from five EU countries (Bulgaria, Denmark, Germany, Italy and the Netherlands) monitored alcohol advertising practices and marketing activities in 2010. During the project a systematic monitoring 'tool' was developed following a method that has been used by the Dutch Institute for Alcohol Policy (STAP) for several years. Furthermore, the AMMIE project aims to investigate the effectiveness of the alcohol marketing regulation systems.

The results of the AMMIE project give insight into the overall presence of alcohol marketing in the five countries and describe the content and the amount of alcohol advertising. Special attention is given to the opinion of young people about the attractiveness of alcohol advertising practices and the amount of exposure to alcohol advertising. Each participating country delivered four country reports which concerned the following topics:

- Complaints filed on alcohol advertising and the opinion of young people versus the Advertising Code Committee on these advertising practices ("Complaints on alcohol marketing: report on complaints and the complaint system of alcohol marketing":
www.eucam.info/eucam/home/ammie-complaints.html);

- The volume of alcohol advertising on television and exposure of minors (“Report on youth exposure to alcohol commercials on television in Europe”; www.eucam.info/eucam/home/ammie-volume.html);
- Sport sponsorship by alcohol producers (“Alcohol related sports sponsorship: report on sport sponsorship by alcohol producers; www.eucam.info/eucam/home/ammie-sports-sponsoring.html) and
- Trends and innovations with regard to alcohol marketing (“Trends in alcohol advertising: report on trends and innovations in alcohol marketing”; www.eucam.info/eucam/home/ammie-trends.html).
- In addition, a European report was written on the topic of Complaints (“To appeal or not to appeal: testing self regulation of alcohol advertising”; www.eucam.info/eucam/home/ammie-complaints.html) in which the data of the five countries on these topics were combined.
- A final report was written to summarize the conclusions and recommendations evolving from the AMMIE project. Commercial promotion of drinking in Europe (“Key findings of independent monitoring of alcohol marketing in five European countries”; www.eucam.info/eucam/home/ammie-report-europe.html).

The results of comprehensive monitoring will allow the European Commission and the Member States of the European Union to improve the existing regulation of alcohol marketing in order to better protect young people against its proven harmful influence.

1.4 This report

Because of the importance of the volume (amount) of alcohol advertising, the present AMMIE report focuses on this topic. In other AMMIE reports (e.g. ‘Report on complaints and the complaint system in Bulgaria’ and ‘Monitoring of trends and innovations with respect to alcohol advertising and marketing’), issues with regard to the content of alcohol advertising are discussed.

Since the majority of the alcohol marketing expenditures on ‘traditional’ media (e.g. radio, TV, print, outdoor and cinema) are still on the medium television, the data for the present report concern alcohol commercials broadcast on television.

With the data, we will try to give an answer to the following questions:

1. What are the characteristics of the advertisements broadcast in May and October 2010?
2. How many exposures to alcohol advertising occurred in May and October 2010?
3. How much exposure do different age groups have to alcohol advertisements?
4. Which brands are generating the greatest youth (over)exposure?
5. How is the ‘30% threshold’ protecting large numbers of minors from being exposed to alcohol advertising?

6. What would an alternative, more ‘proportional’ and protective threshold look like?
7. What could be the possible effect of different time bans on television with respect to the exposure of minors?

2. Method

For the five European countries participating in the AMMIE project, similar television data were bought via The Nielsen Company. This report will only focus on the Bulgarian data, but the method used is similar for all countries.

2.1 Data

Since Nielsen Media does not have data on the reach of advertising, data were bought from TNS TV Plan, in order to obtain this information per alcohol commercial. The data that were bought comprised the following elements:

- Panel: nationally representative for the population aged 4 + peoplemeter panel. Sample size: 950 hhs/2 450 individuals aged 4+.
- Method: number of reported TV channels - 40 TV channels. Reporting of programs of 25 TV channels.
- Data from the Top 3 TV channels watched most by children aged 13 – 17 that were allowed to broadcast alcohol advertisements;
- The advertisements seen in the months May and October 2010;
- The variables delivered per alcohol commercial were: date, channel, time of broadcasting of the spot, duration of the spot, the TV program (before and after the spot), name advertiser, name product/brand;
- With regard to the reach of certain audience groups, data on the following age groups were provided: the total number of viewers that was reached (in Bulgaria this is 4 years and older; 4+), the number of children aged 4-12 watching (4-12), the number of children aged 13 – 17 watching (13-17), the number of people between the age of 18 - 34 watching (18-34) and the number of people of 35 and older watching (35+).

The selection of Top 3 channels watched most by 13-17 year olds will therefore always give a large underestimation on the total number of exposures to alcohol advertising that took place. It is important to keep this restriction in the data in mind.

TV Universe versus census data

In the report we will sometimes refer to the so called 'TV population' or 'TV universe'. This implies the total number of possible viewers (aged 4 years and older) since they are in the possession of a television. The TV universe has been used in all analyses in this report as the 'reference group' since the data are based on television viewing behaviour. Bulgaria received estimation of the TV universe

from Nielsen. The size of the TV universe is usually somewhat smaller than the number abstracted from the 'census data'. The census data have been derived from the Bulgarian NSI Database and gives an indication of the total number of Bulgarian inhabitants at a certain time (in the Bulgaria this data was registered at the 31th December 2010).

In Table 1 the size of both the TV universe as well as the census data have been provided, including the distribution over all relevant age groups. As can be seen, the Bulgarian TV universe and the census data are similar.

Table 1: Size and distribution of the TV population and the Bulgarian population

Age group	Bulgarian population (N) (census data)		TV Population (N)	
	absolute	percentage	absolute	percentage
4+	7.504.868	100%	7.245.000	100%
4-12			591.000	8,2%
4-17			964.000	13,3%
13-17			414.000	5,7%
18+			6.281.000	86,7%
18-34			1.789.000	24,7%
35+			4.492.000	62,0%

Note: TV Population Figures are the maximum over two months.

Census data for absolute number of Bulgarian population: source of National Statistical Institute of Bulgaria (nsi.bg), December, 2010.

2.2 AMMIE Volume Protocol

While analyzing and working with the data all AMMIE partners followed a specially developed Volume Protocol, written by the Dutch Institute for Alcohol Policy (STAP) (Van den Broeck & Van den Wildenberg, 2011). STAP provided the main variables for all partners e.g. ID number per alcohol commercial, absolute number of viewers reached by an ad, Gross Rating Points or GRPs (which give insight into the number of viewers reached within a certain age group), % Program (which gives insight into the distribution of the age of the viewers of a certain program) and the TV universe. The final few variables were created for all relevant age groups mentioned above. Data for 4+, 4-12, 13-17, 18-34 and 35+ were provided by Nielsen. Based on the absolute numbers for these age groups, STAP created the data for the groups 4-17 (all minors) and 18+ (all adults). The country coordinators filled out the remaining variables that were needed for the calculations on the characteristics. An example is the variable 'product category' in which it was defined whether a certain ad was advertising for e.g. beer, wine, sweet mixdrinks, spirits or alcohol free beverages. The majority of the analyses were performed in Excel 2007, some additional analyses took place in SPSS 17.0.

In developing the protocol STAP was advised by associate professor David Jernigan from the Johns Hopkins Bloomberg School of Public Health and Craig Ross from Virtual Media Resources, Inc., Natick, Massachusetts, USA who have been working with similar data in the past and can be called experts in this field (see e.g. Jernigan & Ross, 2010).

3. Results

In this chapter the results of the data analyses will be described. In order to do this, the chapter is divided into four parts that cover the following topics:

- *Characteristics of the data.* What does the alcohol advertising in May and October 2010 look like with respect to the number of ads per hour of the week and per day? What is the distribution by beverage type, producer and brand?
- *Exposure to alcohol advertising.* Are there differences in exposure to alcohol commercials with respect to specific age groups, the type of beverage and certain brands?
- *Thresholds with respect to the reach of minors.* We will test the 30%-threshold originating from the Bulgarian self regulatory code of conduct of the alcohol producers which states that alcohol advertising is not allowed when the audience consists of more than 30% minors. Although the threshold was set in November, 2010, it was established before that on an EU level and it should have been enforced. We will look about the age distribution in May and October, and how it will be influenced by a possible reduction of the threshold.
- *Effect of a watershed.* Finally we will try to get more insight into the possible effects of a (legal) time restriction on alcohol advertising on television. How might a time ban affect the per capita exposure of minors?

3.1 Characteristics of the data

As mentioned in the methods section, the data that were bought comprised the Top 3 channels most often watched by 13-17 year olds in Bulgaria. In May as well as October 2010 this turned out to be the channels bTV, Nova, and Diema Family. In May a total of 1.794 alcohol commercials were broadcast on these three channels. The total number in October was significantly lower, 325.

3.1.1 Number of ads per day of the week

When we take a closer look at the data it becomes clear that Sunday is the most popular day of the week to broadcast alcohol commercials (see Figure 1). In May relatively high peaks can also be observed on Monday and Saturday.

Number of ads per day of the week

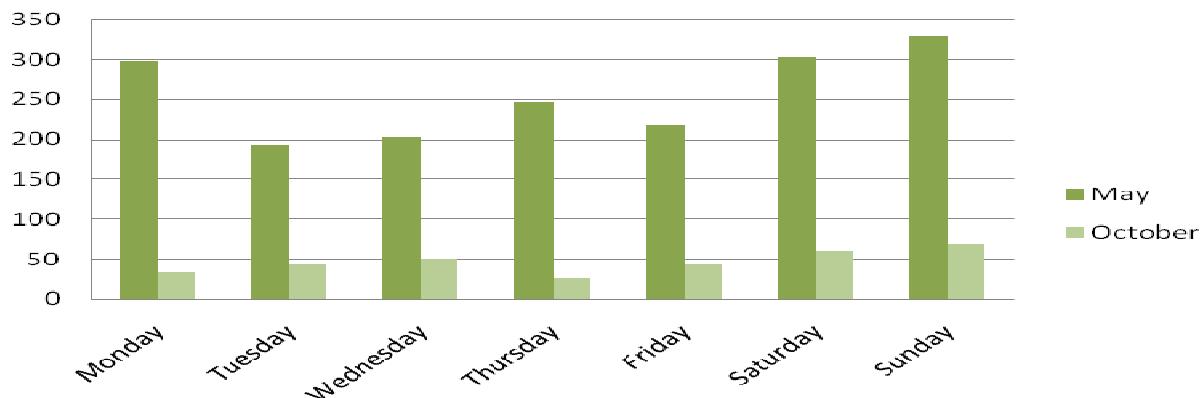


Figure 1. Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds (between 21.00-2.00h). Therefore, the total number of ads in these months is in fact higher than depicted here. Source: Nielsen Media and TNS TV Plan 2010.

3.1.2 Number of ads per hour of the day

The occurrence of alcohol commercials is often found to peak within certain hours of the day. In Bulgaria the legal time ban on indirect advertising of spirits before 22:00h. is not strictly adhered to, meaning that there are breaches. The time of advertising of other types of alcohol products is not restricted. One can see (Figure 2) that in May and October, 2010, the peak broadcast time for alcohol commercials was roughly between 19:00h. and 24:00h (around 50%).

Number of ads per hour of the day (3 TV Channels)

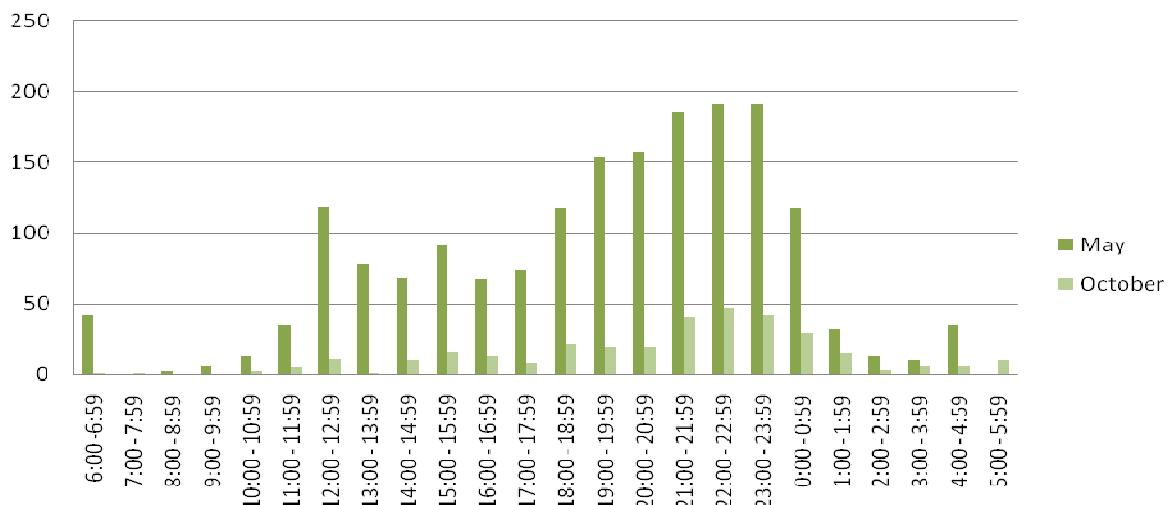


Figure 2. Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds (between 21.00-2.00h). Therefore, the total number of ads in these months is in fact higher than depicted here. Source: Nielsen Media and TNS TV Plan 2010.

In May almost half (48,9%) of the advertising took place between 19.00-24.00. In October the distribution is similar - 51,4%. Of course, the number of ads in October is much smaller, which

probably has to do with the seasonal influences on the advertising pattern: most advertising of alcohol in Bulgaria is focused on beer.

There are two distinctively weak advertisement periods: between 2.00h. and 6:00h., and between 8:00h.-10:00h., during which only small amounts of alcohol commercials were broadcast in both May and October. For the exact number of alcohol commercials per hour of the day see Figure 2.

3.1.3 Number of alcohol ads per product category

With respect to type of alcoholic beverage, which is being advertised, it becomes clear that beer advertising prevails in Bulgaria: in May 90,0% (N = 1.615) of all alcohol commercial were for beer (see Table 2), and in October – an even higher percentage: 93,5% (N = 304).

Table 2. Number of ads per product category

Product category	May		October		Total May + Oct	
	N	Percentage	N	Percentage	N	Percentage
Beer*	1.615	90,0	304	93,5	1.919	90,6%
Wine**	166	9,3	0	0,0	166	7,8%
Spirits	13	0,7	21	6,5	34	1,6%
Total	1.794	100%	325	100%	2.119	100%

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds (between 21.00-2.00h). Therefore, the total number of ads in these months is in fact higher than depicted here. Source: Nielsen Media and TNS TV Plan 2010.

The second beverage type advertised substantially is wine: 9,3% of all ads in May (N = 166), but no ads in October. Spirits are least advertised: 0,7% of all ads in May (N = 21) were for products like whiskey, rakia, vodka, etc., and 6,5% in October (N = 21).

3.1.4 Number of ads per alcohol producer and brand

A total of 13 different producers of alcoholic beverages were active in May and October. Together they advertised for 25 different brands (see Table 3 and Figure 3 for a complete overview).

Most commercials in May were broadcast by Zagorka PLC (N = 557), for three different brands, namely: Ariana (10% of the total), Heineken (6,2%) and Zagorka (14,8%). The commercials of Zagorka PLC covered 31% of the total number of alcohol commercials in May (see Figure 4). The second largest producer in May was Carlsberg with 454 commercials in total, for the brands Pirinsko pivo (11,9 % of the total), Shumensko pivo promo (2,5%), Shumensko pivo (3,4%) and Tuborg (7,5%).

Most commercials in October were broadcast by Carlsberg (N=158), for four different brands, namely: Carlsberg (3,1% of the total), Pirinsko pivo (18,2%), Shumensko dark (9,2%) and Shumensko pivo (18,2%). The commercials of Carlsberg covered 48,6% of the total number of alcohol commercials in October (see Figure 5). The second largest producer in October was Kamenitza PLC with 71 commercials in total, for the brands Kamenitza Tamno (21,2%) and Kamenitza (0,6%).

Table 3. Number of ads per producer and brand in May and October 2010.

Producer	Total May & Oct		Brand	May		October	
	N	Percentage		N	Percentage	N	Percentage
Binding BG LTD	7	0,3	Radeberger beer	7	0,4	0	0,0
Black Sea Gold			Pomorijska				
Pomorie LTD	3	0,1	Grozdova rakia	3	0,2	0	0,0
Boliarka VT	2	0,1	Boliarka beer	2	0,1	0	0,0
Carlsberg	612	28,9	Carlsberg beer	0	0,0	10	3,1
			Pirinsko Pivo				
			beer	214	11,9	59	18,2
			Shumensko Pivo				
			promo beer	61	3,4	0	0,0
			Shumensko beer	44	2,5	59	18,2
			Shumensko dark				
			beer	0	0,0	30	9,2
			Tuborg beer	135	7,5	0	0,0
			Johnnie Walker				
Diageo	8	0,4	whiskey	8	0,4	0	0,0
			Heineken				
Heineken	67	3,2	PROMO beer	0	0	75	23,1
Kamenitza PLC	442	20,9	Becks beer	82	4,6	0	0,0
			Kamenitza beer	146	8,1	2	0,6
			Kamenitza				
			svetlo beer	1	0,1	0	0,0
			Kamenitza				
			Tamno beer	0	0,0	69	21,2
			Staropramen				
			beer	142	7,9	0	0,0
Ledenika PLC	78	3,7	Ledenika beer	78	4,3	0	0,0
Maxxium			Tullamore Dew				
Bulgaria	21	1,0	Black whiskey	0	0,0	21	6,5
Vinprom			Peshtera mastic				
Peshtera	148	7,0	brandy	2	0,1	0	0,0
			Yambol grape	146	8,1	0	0,0
			Merakliysko red				
Vinprom Yambol	153	7,2	wine	153	8,5	0	0,0
Wine Cellar			Edoardo Miroglio				
Elenovo	13	0,6	wine	13	0,7	0	0,0
Zagorka PLC	665	31,4	Ariana beer	180	10,0	0	0,0
			Heineken beer	111	6,2	0	0
			Zagorka beer	266	14,8	0	0,0
Total	2.119	100%		1794	100%	325	100%

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds (between 21.00-2.00h). Therefore, the total number of ads in these months is in fact higher than depicted here. Source: Nielsen Media and TNS TV Plan 2010.

Distribution of producers of alcohol commercials in May + Oct 2010

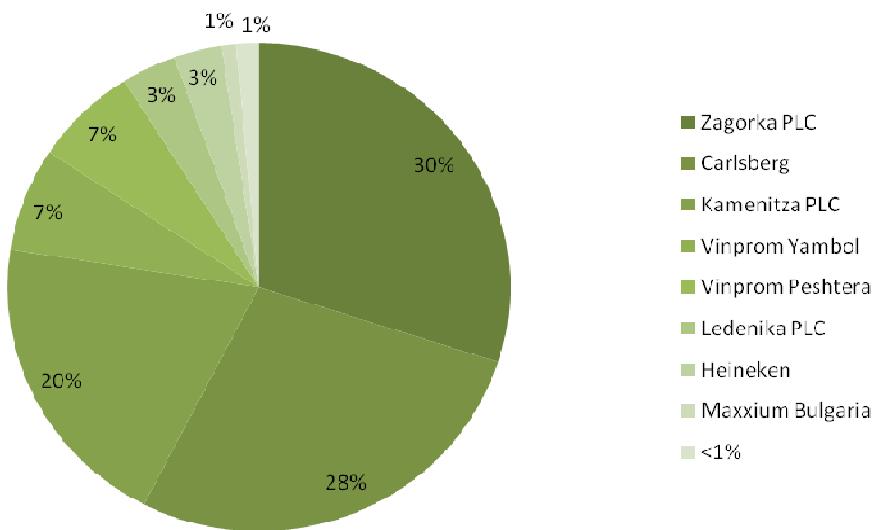


Figure 3. Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here. Brands presented clockwise, based on the largest amount of advertisements. Source: Nielsen Media and TNS TV Plan 2010.

3.1.5 Summary characteristics

To sum up, a total of 2.119 alcohol commercials were broadcast in May and October 2010 on the Top 3 TV channels most watched by 13-17 year olds. Most advertising occurred in May (N = 1.794). The favorite day for alcohol advertising appears to be Sunday. The majority of Bulgarian Dutch alcohol commercials are for beer (90,0% in May, and 93,5% in October), followed by wine (9,3% in May) and spirits (0,7% in May and 6,5% in October). No advertising was found for sweet beverages. A total of 13 different producers of alcoholic beverages were active in May and October. Together they advertised for 25 different brands. Most commercials were broadcast in May by Zagorka (N = 557; 31% of the total), and in October by Carlsberg (N = 158; 48,6% of the total). Now that we have a better view of what the data look like, we will look more into depth at the *exposure* that these alcohol commercials generated.

3.2 Exposure to alcohol advertising

In this section we will look more into detail in the amount of exposure to alcohol advertising, e.g. by different age groups. In order to do this, Gross Rating Points (GRPs) will be used. GRPs are a standard to measure *per capita* exposure to advertising. GRPs are calculated by dividing the total number of exposures to an ad within a certain age group (also called 'gross impressions') by the total number of possible viewers (television universe) within this same age group.

Gross Rating Points (GRPs) tell us two things:

- The percentage of people in a specific age group that was reached by an ad
- The average number of alcohol ads a person in an age group was exposed to

GRPs = Impressions (no. of exposures)_d / Population_d x 100

(d = a specific demographic age group)

Before discussing GRPs and percentage thresholds regarding the exposure of minors, the distribution of the number of impressions amongst minors will be discussed.

3.2.1 How much exposure to alcohol advertising occurred in May and Oct 2010?

In Figure 1 the total number of exposures (impressions) to alcohol advertising is displayed. In total, about 553.5 million times someone from the Bulgarian (TV) population aged 4 years or older (4+) was reached by the 2.119 alcohol ads that were aired. It is also shown how these exposures are distributed over the different age groups in Bulgaria (third column).

Advertising impressions for adults

The distribution of the data shows us that 93,4% of all alcohol commercials broadcast on the most popular channels for youngsters in May and October 2010 were seen by the adult population (18+). In total almost 517 million times an adult of 18+ was exposed to an alcohol commercial.

Advertising impressions for minors

Minors (4-17) saw 6.6% of all alcohol commercials. The total number of times a minor was exposed to an alcohol commercial in these months was 36,5 million. In other words, 36,5 million times a minor saw an alcohol ad on television in May and October 2010 (this number is an underestimation because only data of three channels were bought). This number does not mean that 36,5 million minors were exposed. One person can be exposed several times, while others have not been reached at all. But one can conclude that 36,5 million times 'a minor saw a commercial'.

Of the 6,6% of all alcohol advertising impressions that was seen by minors (aged 4-17), 48% were seen by the youngest age group of 4-12 (3,2% / 6,6%). The remaining 52% (3,4% / 6,6%) of the impressions reaching minors were seen by the 'older' age group of 13-17.

3.2.2 Differences in exposure per age group

The absolute number mentioned above is impressive, but does not tell us anything about the 'average number' of alcohol commercials someone from a specific age group was exposed to in May and

October. In order to calculate this, GRPs are introduced. GRPs take the size of the different age groups into account, which allows us to say something about the average exposure per group.

Table 4. Average exposure per person per age group (GRPs)

Age group	GRPs	Average number of exposures per person in the age group over 2 months (GRP/100)**	Average number of exposures per person in the age group (GRP/90)**
4+	7.640,4	76,4	84,9
4-17	3.790,3	37,9	42,1
4-12	3.141,3	31,4	34,9
13-17	4.680,1	46,8	52,0
18+	8.231,1	82,3	91,5
18-34	5.535,6	55,3	61,5
35+	9.304,6	93,0	103,4

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here. *GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within a certain age group divided by the number of possible viewers (television universe) within this same age group *100.

**Using the simplifying assumption that 90-100% of the age group was reached with alcohol advertising in the selected period. Since a reach of 100% is rather unrealistic, also the average number of ads seen per age group with a reach of a more realistic 90% has been calculated. A reach of 100% leads to an underestimation of the real number of ads seen per person. The lower the reach of the ads has been in practice, the higher the average number of ads seen per person.

Source: Nielsen Media and TNS TV Plan 2010.

Average exposure: GRPs

The *total* number of GRPs per age group (Table 4) are calculated by dividing the total number of exposures by the size of the TV population of that particular age group, times 100. In order to get to the *average* number of alcohol commercials a person in a specific age group was exposed to, the total number of GRPs is divided by 100 (assuming a 100% reach).

From Table 4 it becomes clear that the subgroup aged 35 and older (35+) saw on average the most alcohol advertisements in the months May and October 2010 (a total of 9.305 GRPs). Assuming a 90-100% reach, this equals the exposure to on average 93 to 103 alcohol commercials per person (on the three selected channels). This is only slightly more than the age group of 18+ who generated 8.231 GRPs. Applying the same assumption of 90-100% reach, this equals on average 82 to 91 alcohol ads per adult in two months time. In comparison the age group of 18-34 (young adults) saw on average 55 to 61 alcohol ads in two months.

When we look at the underage viewers, the group of 4-17 year old generated 3.790 GRPs. With the same assumption of reach, a minor would have been exposed by 38 to 42 alcohol commercials in the selected period. However, when looking at the difference between the 'younger' minors (4-12) and the 'older' minors (13-17), it becomes clear that the older minors saw much more alcohol ads than the younger ones. The children aged 4-12 generated 3.141 GRPs, which equals to an average of 31 to 35 ads per child. However, the 'at risk' group of 13-17 year old (just starting to drink), generated 4.680

GRPs, which would roughly equal to an average of 47 to 52 alcohol commercials per person. This number of 47 ads is closer to the number of ads seen by the young adults (18-34, who saw 55 ads) than to the number of ads seen by the youngest children (4-12, who saw 31 ads).

The at risk youth aged 13-17 is exposed to an alcohol ad on television at least every other day (the data are based on only 3 TV channels).

It should be noted that these average numbers of alcohol commercials that were seen by someone belonging to a certain age group are ***underestimations*** for two reasons:

- We only analyzed data from the Top 3 TV channels in May and October 2010 most often watched by minors aged 13-17;
- This is a rather conservative approach, since in practice the reach is never 100% but somewhat lower. In the U.S. e.g. it comes down to approximately 91%. Using a 100% reach instead of a lower, and more realistic, reach leads to an *underestimation* of the average number of exposures (e.g. assuming a reach of 90%, minors aged 13-17 would not have been reached by an average of 47 commercials, but 52). Given this practical issue, the average number of ads seen per person will in reality be more equal to the numbers presented in the final column of Table 4 (90% reach).

Youth overexposure: GRP ratios

It is also interesting to compare youth exposure to alcohol advertising relative to the exposure of (young) adults. In these analyses we focus on the 'at risk' group of 13-17 year olds, who are just starting to drink alcohol and are therefore more vulnerable to the effects of alcohol advertising. Jernigan and Ross (2010) also emphasize the importance of paying particular attention to this group of minors, since they are at risk for underage drinking and are exposed to the majority of the alcohol advertising reaching minors (67% in the US and 52% in Bulgaria, see § 3.2.1 above).

In order to calculate a GRP ratio of possible 'youth overexposure', we divide the total number of GRPs of the 'at risk' group (13-17), by the total number of GRPs of the comparison group (e.g. young adults (18-34) or the entire adult population (18+)). If the ratio equals 1, both minors and (young) adults are exposed to an equal amount of advertising. If the ratio is larger than 1, this means that youth are relatively overexposed to alcohol advertising compared to (young) adults. In Table 5 it is shown that both GRP ratios are lower than 1. This is an indication that the 13-17 year olds are not seeing more alcohol advertising per capita compared to adults. Apparently, 13-17 year olds receive 57% of the exposure of adults (18+) and 84% of the exposure of young adults (18-34).

In more than one fifth of the 2.119 alcohol commercials youth aged 13-17 turned out to be relatively overexposed compared with adults (that is, more minors were reached in relation to the size of the own age group, compared with adults in relation to the size of this age group). In 22,0% of all commercials being broadcast relatively more 13-17 year olds were reached compared with adults (18+). This percentage of overexposure was slightly higher when the youngsters were compared with

young adults aged 18-34: 32,0% of the commercials exposed relatively more 13-17 year olds (see Table 5).

Table 5. Comparing the exposure of different age groups to alcohol advertisements in May and October

Groups compared	GRP ratio*	Percentage of overexposing ads	Percentage of exposure from overexposing ads
13-17 / 18+	0,57	21,7%	37,2%
13-17 / 18-34	0,85	31,8%	57,9%

*GRP ratio = Gross Rating Points ratio: the total number of GRPs for age group 13-17 divided by the total number of GRPs for the age group 18+ resp. 18-34. A GRP ratio > 1 is an indication that youth are being exposed to more advertising per capita than (young) adults. Source: Nielsen Media and TNS TV Plan, 2010.

Percentage of youth overexposure

Although the GRP ratios are below 1, the data show that more than one fifth (21,7%) to a third (31,8%) of the 2.119 alcohol commercials youth aged 13-17 were relatively overexposed compared with adults (that is, more minors were reached in relation to the size of their own age group, compared with adults in relation to the size of their age group; per capita youth saw more alcohol ads than adults). In 21,7% of all commercials being broadcast relatively more 13-17 year olds were reached compared with adults (18+). This percentage of overexposure was slightly higher when the youngsters were compared with young adults aged 18-34: 31,8% of the commercials exposed relatively more 13-17 year olds (see Table 5).

Percentage of youth exposure resulting from overexposing ads

When the total number of GRPs generated by the overexposing ads is divided by the total number of GRPs for 13-17 year olds, it becomes clear that almost half (37,2% - 57,9%) of the total exposure to alcohol advertising amongst 13-17 year olds is coming from the overexposing ads where youth on a per capita basis receive more exposure compared with adults (see Table 5, final column).

3.2.3 Differences in exposure for different types of alcohol

Instead of looking ‘globally’ at possible youth overexposure by alcohol advertising, we can also investigate whether or not certain types of beverages are reaching relatively more youth compared with adults. From Table 6 we can conclude that this is not the case for the Bulgarian data. The GRP ratios for neither beer, wine, sweet alcoholic beverages nor spirits are above 1. This is an indication that youth aged 13-17 are not in particular exposed to commercials for a certain type of alcoholic beverage.

Table 6. Exposure per product category

Category	GRPs			GRP ratio		% Overexposing ads		% Exposure from overexposure	
	Age 13-17	Age 18+	Age 18- 34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34
Beer	3.805	7.128	4.563	0,53	0,83	20,0%	31,0%	33,3%	57,1%
Wine*	420	521	460	0,81	0,91	2,5%	37,3%	56,1%	61,5%
(Sweet) beverages**	0	0	0	0,00	0,00	0,0%	0,0%	0,0%	0,0%
Spirits	455	582	513	0,78	0,89	2,5%	34,4%	51,6%	60,8%
Total	4.680	8.231	5.536	0,57	0,85	21,7%	31,8%	37,2%	57,9%

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here. GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within a certain age group divided by the number of possible viewers (television universe) within this same age group *100. Numbers in red indicate that more than half of the exposure results from overexposing ads where youth receive more exposure on a per capita basis compared with adults. Source: Nielsen Media and TNS TV Plan, 2010.

GRP ratios

The highest GRP ratio was found for wine. The GRP ratios for exposure of 13-17 year olds compared with adults resp. young adults to wine ads were 0,81 resp. 0,91. Thus, for every 10 beer commercials a (young) adult was exposed to, a 13-17 year old saw 8 to 9 of these. The same holds for spirits.

Percentage of youth overexposure

For the three 'reliable' product categories beer, wine and spirits one can see that roughly in a quarter to one third of the cases 13-17 year olds were relatively overexposed compared with older viewers (a higher percentage of minors -within the age group of minors- saw the commercial, compared with adults -within the age group adults). The percentages of overexposing ads are highest among the category of beer (approx. 20%) and significantly lower for wine and spirits ads (approx. 2,5%).

Percentage of youth exposure resulting from overexposing ads

The final column in Table 6 reveals that half (wine) to more than half (spirits) of the total youth exposure results from the overexposing ads where youth receive more advertising per capita compared with adults. Also, when youth 13-17 are compared to young adults, it turns out that more than half (61,5%) of the total youth exposure to advertising for wine results from the overexposing ads.

3.2.4 Differences in exposure for different brands

Besides looking at product category, it is also interesting to look at youth overexposure at the brand level. Are there certain brands that expose relatively more minors than adults? In Table 7 all 25 brands are provided together with the total number of GRPs per age group and the GRP ratios indicating overexposure (ratio > 1) or not (ratio < 1).

Table 7. Exposure per brand

Brand	GRPs			GRP ratio		% Overexposing ads		% Exposure from overexposure	
	Age 13-17	Age 18+	Age 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34
Ariana	499	1.052	638	0,47	0,78	14,4%	28,3%	22,6%	50,0%
Beck's	163	375	250	0,44	0,65	18,3%	22,0%	34,1%	40,7%
Boliarka	6	13	5	0,44	1,23	0,0%	50,0%	0,0%	73,7%
Carlsberg	43	35	22	1,23	1,95	70,0%	90,0%	89,1%	95,7%
									100,0
Edoardo Miroglia	8	19	16	0,39	0,49	15,4%	30,8%	75,9%	%
Heineken Promo	73	95	58	0,76	1,26	20,0%	26,7%	65,6%	76,7%
Heineken	281	638	403	0,44	0,70	15,3%	29,7%	22,0%	47,6%
Johnnie Walker	10	22	21	0,45	0,46	0,0%	0,0%	0,0%	0,0%
Kamenitza Svetlo	8	13	8	0,58	0,98	0,0%	0,0%	0,0%	0,0%
Kamenitza Tamno	398	694	385	0,57	1,04	20,3%	42,0%	20,7%	58,2%
Kamenitza	295	519	331	0,57	0,89	20,9%	30,4%	34,6%	61,5%
Ledenika	177	320	205	0,55	0,86	23,1%	29,5%	29,1%	39,9%
Merakliysko	412	502	444	0,82	0,93	34,0%	37,9%	55,8%	60,8%
Peshtera	0	4	4	0,00	0,00	0,0%	0,0%	0,0%	0,0%
Pirinsko Pivo	350	525	398	0,67	0,88	22,3%	30,0%	62,2%	74,9%
Pomorijska									
Grozdova Rakia	2	4	3	0,55	0,69	0,0%	33,3%	0,0%	53,2%
								100,0	100,0
Radeberger	6	6	3	0,93	1,69	42,9%	42,9%	%	%
Shumensko Dark	86	101	95	0,85	0,90	40,0%	46,7%	56,4%	64,8%
Shumensko Pivo									
Promo	73	117	91	0,62	0,80	21,3%	29,5%	48,9%	68,0%
Shumensko Pivo	117	175	119	0,67	0,98	25,2%	35,9%	60,2%	78,9%
Staropramen	354	687	438	0,52	0,81	18,3%	34,5%	32,3%	58,3%
Tuborg	154	255	191	0,61	0,81	20,7%	28,1%	50,1%	67,6%
Tullamore Dew									
Black	75	102	79	0,73	0,95	23,8%	38,1%	45,2%	73,7%
Yambol Grape	368	449	405	0,82	0,91	32,2%	36,3%	54,6%	59,9%
Zagorka	724	1.509	923	0,48	0,78	15,8%	30,1%	20,4%	50,3%
Total	4.680	8.231	5.536	0,57	0,85	21,7%	31,8%	37,2%	57,9%

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here.

GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within

a certain age group divided by the number of possible viewers (television universe) within this same age group *100.
Numbers printed in red indicate youth over exposure (GRP ratio > 1 or a percentage > 50% with regard to the amount of exposure resulting from overexposure).
Source: Nielsen Media and TNS TV Plan, 2010.

GRP ratios

As it becomes clear from the data, one brand shows GRP ratio larger than 1, indicating youth overexposure: Carlsberg beer. As can be seen in Table 7, the total number of GRPs for Carlsberg beer amongst the age group of 13-17 was 42,8. The number of GRPs for adults (18+) for the same brand was 34,9. The GRP ratio of 1,23 indicates that youth were seeing 23% more advertising for Carlsberg beer than adults on a per capita basis.

Percentage of youth overexposure

When looking more closely at the percentage of ads which are overexposing youth compared with adults, brands with a relatively low GRP ratio e.g. Johnnie Walker and Edoardo Miroglio also have relatively lower percentages of ads that overexpose youth (resp. 0% and 31% of the ads for these two brands). However, other brands e.g. Boliarka and Carlsberg overexpose youth in resp. 50% and 90% of their broadcast ads.

Percentage of youth exposure resulting from overexposing ads

After calculating the percentage of youth exposure resulting from the overexposing ads, it turns out that 11 out of 25 the brands generate more than half of their total youth exposure from the overexposing ads (see final column, Table 7). It concerns the following brands: Yambol Grape, Tuborg, Shumensko Pivo, Shumensko Dark, Shumensko Pivo Promo, Radeberger, Pirinsko Pivo, Merakliysko, Heineken Promo, Carlsberg and Edoardo Miroglio.

3.2.5 Summary exposure data

Taken together, of all alcohol advertising reaching minors, 48% is seen by the youngest age group (4-12) and 52% is seen by the 'older' minors (13-17). Children aged 4-12 generated 3.141 GRPs, which equals to an average of 31 to 35 ads per child in the selected period (assuming a 90-100% reach). The 'at risk' group of 13-17 year old (just starting to drink), generated 4.680 GRPs, which would roughly equal to an average of 47 to 52 alcohol commercials per person. In other words, on average, a 13-17 year old saw at least one alcohol commercial every other day (based on data from 3 TV channels). The number of ads seen by the 13-17 year olds is closer to the number of ads seen by the young adults (18-34) - who saw approximately 55 to 61 alcohol ads (5.536 GRPs) - than to the number of ads seen by the youngest children (4-12).

GRP ratios - comparing the amount of exposure by youth versus adults - were below 1, indicating that, in general, youth were not overexposed compared with adults. The GRP ratios of 0,57 resp. 0,85 indicate that for every 10 ads seen by an adult (18+) resp. young adult (18-34), youth aged 13-17 saw

approximately 6 to 8 ads. Although the GRP ratios are below 1, the data show that in approximately 1/5 (21,7%) to a third (31,8%) of the 2.119 alcohol commercials youth aged 13-17 were relatively overexposed compared with adults resp. young adults. It turns out that 37,2 to 57,9% of the total exposure to alcohol advertising amongst 13-17 year olds is coming from the overexposing ads where youth on a per capita basis receive more exposure compared with (young) adults.

Similar results are found when looking at specific beverages types and specific brands. The GRP ratios for beer, wine and spirits were all below 1, indicating no overall youth exposure. However, a fifth of all ads for beer (20,0%) were reaching more youth on a per capita basis compared with adults. It turns out that more than half (56-61%) of the total youth exposure to wine advertising results from overexposing ads. Also, when youth 13-17 are compared to young adults, the data reveal that more than half (61%) of the total youth exposure to advertising for spirits results from the overexposing ads. On the brand level, only one out of 20 brands was found to overexpose youth (13-17) relative to adults (18+), in general. The GRP ratio of 1,23 found for Carlsberg indicates that youth were seeing 23% more advertising for the beer brand than adults, on a per capita basis. However, when looking more closely at the percentage of ads which is overexposing youth compared with adults certain other brands e.g. Radeberger and Shumensko dark turn out to overexpose youth in approximately 40% of their broadcast ads. In total, 11 out of 25 generate more than half of their total youth exposure from the overexposing ads. Additional examples of these brands are e.g. Edoardo Miroglio Heineken Promo.

3.3 Thresholds in exposure to alcohol advertising

In their (voluntary) codes of conduct, the alcohol advertisers included a measure that should prevent large amounts of minors from being reached by alcohol advertising. The alcohol advertisers included a so called '**30% threshold**' in their voluntary codes in order to prevent too much minors from being reached by alcohol advertising. This threshold was introduced in Bulgaria on the 4th of November, 2010, but it existed on EU level before that. In the Bulgarian 2010 data from May and October, however, 16 violations of this rule were encountered.

This threshold originates from the US, where it has been based on the proportion of minors relative to the total population. However, in the US, one is underage until the age of 21, rather than 18 as is the case in Europe. Therefore, the proportional standard of 30% that might be applicable to the US (and even this can be called into question, see CAMY, 2005; Jernigan & Ross, 2010), will be by far too high for European countries, simply because our proportion of minors on the total size of the population is much smaller.

Note: The total number of 4-17 year olds on the total 4+ TV population in Bulgaria comes down to 13,3% (see Table 1). Therefore, one can argue that solely based upon the distribution of television viewers (not taking into account the non-registered children of 0-4 years old), the percentage threshold of 30% is too permissive and should be adjusted to 6%.

3.3.1 Testing the 30% threshold

With respect to the present data, the 30% threshold implies that alcohol commercials broadcast on TV should not reach a viewers audience consisting of more than 30% minors. In order to examine the adherence to the 30% threshold, it was calculated what the percentage of minor viewers (aged 4-17) was, on the total number of viewers of the particular program (and alcohol commercial that was broadcast along this program). In the Bulgaria 16 violations of the 30% threshold were found in the data of May and October (note: this self-regulatory code was still not introduced in Bulgaria, but it was already present in an EU level). In other words, 16 times an alcohol commercial reached an audience consisting of more than 30% minors aged 4-17.

For example, the advertisement of Pirinsko pivo, shown on the 29th of October, 2010 on the bTV channel, at 1:34, reached 4.028 viewers aged 4-17, or 57,2% of the total number; the ad of Ledenika beer, shown on the 21th of May, 2010, on Diema Family, at 12:14, reached 5.013 viewers aged 4-17, or 52,3% of the total number.

Channel

8 violations were on channel Diema, 7 - on bTV Action, and 1 violation - on Nova.

Brand

It turned out that the 16 violations covered 9 of the 25 brands for which was advertised in May and October (see Figure 4). In other words, for more than one third violations occurred. The brand for which the highest number of violations was found was Heineken Promo (4 violations). This is not unexpected given the finding of a high GRP ratio for this brand (see § 3.2.4).

The number of violations of the 30%-threshold in May and Oct 2010 per brand

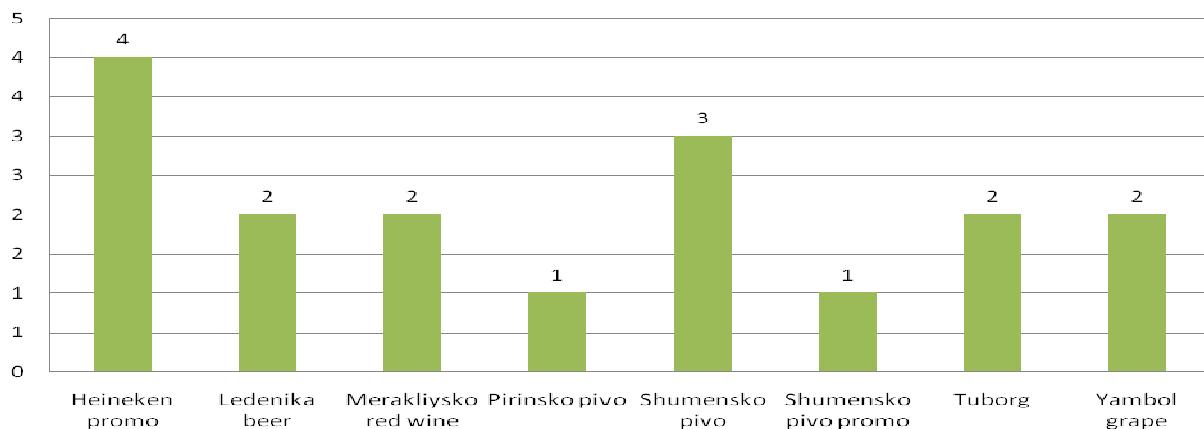


Figure 4. Note. The number of violations is based on data from the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of violations in these months will probably be higher than depicted here. Source: Nielsen Media and TNS TV Plan, 2010

3.3.2 Percentages versus Absolute numbers

In the past STAP already referred to the finding that the 25% (30%) threshold does not seem to be able to protect large numbers of minors from being protected against alcohol advertising (e.g. STAP, 2008a; 2008b). In Table 8, some examples of this particular ‘problem’ are presented.

Table 8

Brand	Program	Percentage of viewers aged 4-17	N aged 4-17	GRP
Pirinsko pivo	Example 1- Late Night Family channel program	57,2%	4.028	0,4
Ledenika beer	Example 2- Afternoon Family live show	52,3%	5.013	0,5
Yambol grape	Example 3- Morning Family live show	34,9%	24 833	2,6
Merakliysko red wine	Example 4- Early morning Family live show	34,9%	4 828	0,5
Kamenitza tamno beer	Example 5 – late night show	10,7%	98 900	10,3
Merakliysko red wine	Example 6- Late night Family live show	12,4%	92 295	9,6

The Table gives insight into three different issues regarding the 30% threshold:

- **Large percentage (more than 50%) & low absolute numbers.** From the first two rows (Table 8), it becomes clear that the seemingly very large violations of the 30% threshold (57,2% resp. 52,3%) in fact have – in absolute numbers - not reached so many Bulgarian minors. At the time of the largest violation of 57,2% 4.028 youngsters were being exposed to alcohol advertising for the beer Pirinsko pivo. Apparently, only 7.040 people were watching this program in total, of which a large majority was underage. The second violation by in which 52,3% of the audience was underage also seems very large. However, in total only 5.013 youngsters were being reached, which is a relatively small absolute number. The small reach is represented as well by both GRPs of the ads of 0,4 resp. 0,5. This means that only 0,4% resp. 0,5% of *all* minors from the ‘TV universe’ aged 4-17 in the Bulgaria was watching at the time of broadcast.
- **Similar percentage ($\pm 35\%$) & large difference in absolute numbers.** From the two rows in the middle (Table 8), it becomes clear that a percentage does not easily say something useful about the amount of underage viewers that is being reached. Both the Yambol grape and Merakliysko red wine commercial violated the 30% threshold and reached an audience consisting of more or less 35% underage viewers. However, the Yambol grape commercial reached a much more substantial number of minors compared to the Merakliysko red wine ad (24.833 resp. 4.828).

- **Low percentage (< 30%) and large absolute numbers.** Finally, the last two rows (Table 8) make clear that alcohol advertising that does *not* violate the 30% threshold can be most harmful of all. The two rows show alcohol commercials for Kamenitza tamno beer and Merakliysko red wine. The ads were broadcast along popular programs: ‘Slavi’s show’ and “Big Brother Family Live’. Both times, the 30% threshold was not violated (percentages of minors of 10,3% resp. 9,6%). However, when we take a closer look at the absolute numbers, it becomes clear that the Kamenitza tamno beer commercial reached almost 99 000 minors. This is 10,3% of all minors aged 4-17 in the Bulgarian television universe (GRP = 10,3). The Merakliysko red wine commercial reached a little more than 92 000 minors. In other words, despite the Code is not being violated, many youngsters are allowed to be reached.

In other words, low percentages, *not* violating the threshold can be much more harmful than (very) high percentages which *are* violating the 30% threshold. This has everything to do with the absolute number of minors - compared to adults - that are watching. As long as there are more adults watching relative to minors, the 30% threshold will not be reached. This way, the 30% rule allows large absolute numbers of minors to be reached by alcohol commercials without the Code is being violated.

3.3.3 A more ‘proportional’ threshold

As mentioned above, there are several drawbacks to a 30% threshold in relation to the exposure of minors. The percentage has been based on the U.S. population, which consists of more minors than the European populations. Therefore, it will be more protective to adjust the current threshold to a lower standard that corresponds better with the composition of the ‘European’ (e.g. Bulgarian) population. To which proportional standard should the 30% threshold be adjusted?

Proportional standard: all minors?

According to CAMY (the Center on Alcohol Marketing and Youth) in the U.S. a standard of 30% would provide adequate protection from overexposure in the U.S. if alcohol advertising impressions were evenly distributed among the 2-20 population (because 2- to 20-year olds make up slightly less than 30% of the US population, see CAMY, 2005). However, 12-20 year olds receive more than two thirds of all advertising impressions among 2-20 year olds. Therefore, it makes much more sense, to adjust the standard to the group of minors that is relatively ‘overexposed’ and runs more risk at underage drinking (CAMY, 2005). In Bulgaria 13-17 year olds receive more than half of all alcohol advertising reaching minors. Therefore, it is very plausible to apply the same way of reasoning for the Bulgarian situation.

Proportional standard: select the ‘at risk’ youth population

When we select a proportional standard based on the relatively ‘higher risk group’ of minors, this would be 12-20 in the U.S. and 13-17 in Europe. Children under the age of 12 generally do not drink alcohol, have a low level of awareness of alcohol advertising, and are not being overexposed to alcohol advertising (CAMY, 2005). Protecting the older group of minors will automatically protect the younger viewers as well.

For these reasons the National Research Council and Institute of Medicine in the U.S. have recommended moving towards a 15% threshold in the U.S. (instead of 30%), based on the size of the 12-20 population (National Research Council and Institute of Medicine, 2004). In addition, 20 state attorneys general requested the Federal Trade Commission to discuss this new proportional standard of 15% with the industry (FTC, 2006).

According to TV population data the ‘at risk’ group aged 13-17 year old comprises approximately 5,7% of the total population. Following the recommendations made by Jernigan and Ross (2010), the National Research Council and Institute of Medicine (2004) and the plea by 20 state attorneys general discussed above, ***the recommendation for the Bulgarian situation would be moving towards a new and more ‘proportional’ standard of 6% (instead of 30%).***

New, proportional standard for Bulgaria

- US: proportional standard of 15% (instead of 30%) based on proportion of 12-20 year olds is recommended by the National Research Council and Institute of Medicine (2004), 20 state attorneys general (2006) and scientists e.g. Jernigan and Ross (2010).
- Bulgaria: proportional standard of 6% (instead of 30%) based on proportion of 13-17 year olds on the total Bulgarian TV population.

Possible effect of a proportional standard of 6%

In case a proportional standard of 6% would have been implemented in Bulgaria the total number of GRPs for 13-17 year olds could have roughly decreased from 4.680 (see Table 4) to 3.066, ceteris paribus. In case 13-17 year olds are better protected, 4-12 year olds will automatically be exposed to less alcohol advertising as well. This estimation implies that a youngster between the age of 13-17 would be exposed on average to 31 alcohol commercials (in two months, on 3 TV channels) rather than 47. This represents a drop of approximately 34% in the number of ads seen (assuming that no shifts in advertising occur). Also 4-12 year olds will automatically be exposed to less alcohol advertising and be better protected.

However, since it is highly unlikely that the advertisers do not change their advertising patterns in order to make up for the lost GRPs, we also calculated the net effect which results after the policy has

been completely nullified (compensated for). In other words, the number of adult GRPs lost will be completely compensated by the advertisers by additional broadcasting.

After running the analysis of introducing a 6% proportional standard, nullified for the loss of adult GRPs, the following results emerge (see Table 9). The policy would lead to a drop in adult GRPs from 8.231 to 7.070 which implicates a loss of 1.161 adult GRPs. Assuming that the advertisers will at least try to make up for this loss, the number of additional GRPs for youth has been calculated, based on the GRP ratio between youth and adults which remained after the introduction of the proportional standard.

Table 9. The possible effect of a 6% proportional standard (including a compensation for lost adult GRPs).

	13-17 GRPs	18+ GRPs	GRP ratio 13-17/18+
Total current GRPs	4.680	8.231	0,57
GRPs left after 6% prop. standard	3.033	7.070	0,43
Change in GRPs	-1.647	-1.161	
Change in adult exposure needed to nullify time ban		1.161	
Effect on youth GRPs (times ratio)	498		
GRPs left	3.531	8.231	
Net change in GRPs	-1.149	0	
Percentual change in GRPs	-24,5%	0%	

Note. GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. The number of GRPs is based on data from the Top 3 TV channels most often watched by 13-17 year olds, in two months of 2010. Therefore, the total number of GRPs in these months is in fact higher than depicted here. Source: Nielsen Media and TNS TV Plan 2010.

That is: it is estimated that the number of additional youth GRPs comes down to 1.647 times 0,43 = 498². This results in a net change in youth GRPs of -1.149 GRPs (on the total of 3.531). This represents a decrease of 24,5% in youth exposure to televised alcohol ads. Due to the compensation in GRPs for adults, there will be no change in the reach of adults (although more ads need to be broadcast to remain at the same level of reach).

Three important assumptions are associated with this type of analysis:

1. The alcohol companies purchase additional ads in permitted timeslots and on programs with the proper audience composition with the same distribution as current advertising and
2. There is sufficient capacity to absorb the shifting advertising in late night programming and
3. If the alcohol industry increases advertising above and beyond the amount that is shifted to make up for lost reach, it purchases new programs with the same distribution as current programs.

Note: Unless a proportional standard accompanies any time ban, then assumptions #1 and #3 can be called unrealistic and alcohol companies can purchase ads on programs with very high youth audience composition in late night programming.

Conclusion

Time bans alone will in Bulgaria not be able to decrease the exposure of young people when being assumed that advertisers will compensate for the loss in adult GRPs. Only a proportional standard would decrease the exposure of young people. These conclusions are only applicable when the assumptions for this type of analysis are fulfilled.

Recommendation

Theoretically, proportional standard can be implemented if possible in combination with a time ban till 24h. or later (as we can assume that especially the youngest children (under 13 years old) aren't watching TV late in the evening). However, practical implications as described in chapter 4 will restrict the effectiveness of a proportional standard.

3.3.4 Summary thresholds

To summarize, the alcohol advertisers included a so called '30% threshold' in their voluntary codes in order to prevent too much minors from being reached by alcohol advertising. In the Bulgarian 2010 data from May and October 16 violations of this rule were encountered. Several issues regarding the 30% threshold deserve to be mentioned. First, the percentage has been based on the U.S. population, which consists of more minors than the European populations. Second, the 30% standard still allows large absolute numbers of minors to be reached, while the Code is not being violated. In other words, low percentages, *not* violating the threshold can be much more harmful than (very) high percentages which are violating the 30% threshold (but in fact reach low absolute numbers of minors). Third, the 30% standard is not proportional to the 'at risk' youth population (aged 13-17) who are starting to drink, are more sensitive to advertising and see more ads. A 'proportional' standard has been recommended by several health organizations, scientists and state attorneys general in the U.S.. The 30% standard regarding 'all minors' allows the alcohol advertisers to relatively overexpose the 13-17 year olds, compared with the 4-12 year olds.

Therefore, a new, more proportional standard of 6% makes more sense for Bulgaria. This is based on the Bulgarian 'at risk' population of 13-17 year olds which comprises 5,7% of the total TV population. The reasons for introducing this new standard are similar with those, supporting the 15% proportional standard that is being advocated for in the U.S. - which is based on the size of the 12-20 age group on the total U.S. population.

3.4 Possible effects of a time ban on exposure to alcohol advertising

An overview of time bans on television, made by the Dutch Institute for Alcohol Policy (STAP, 2009), reveals that a large majority of EU countries has implemented a legal watershed on alcohol advertising. A total of 21 out of 27 EU Member States has a partial or complete ban on alcohol advertising on television (e.g. time and/or product bans). Only six countries have no alcohol marketing restrictions on TV at all: Cyprus, Czech Republic, Denmark, Germany, Greece and Luxembourg.

Due to the ‘prohibition on infringing on the freedom of speech’ as regulated by the First Amendment to the U.S. Constitution, it is difficult in the United States to regulate the volume of alcohol advertising by law. Therefore, in the U.S. a lot of attention is being paid to achieving reductions in youth exposure to alcohol advertising by ‘voluntarily’ lowering the industry standard from 30% to a more proportional standard of 15% (as discussed above). This has thus far not been achieved yet³.

However, in Europe other legislation prevails, which makes it more ‘easy’ to legally restrict alcohol advertising. An overview of time bans on television, made by the Dutch Institute for Alcohol Policy (STAP, 2009), reveals that a large majority of EU countries has implemented a legal watershed on alcohol advertising. A total of 21 out of 27 EU Member States has a partial or complete ban on alcohol advertising on television (e.g. time and/or product bans). Only six countries have no alcohol marketing restrictions on TV at all: Cyprus, Czech Republic, Denmark, Germany, Greece and Luxembourg.

See Appendix 3 for an overview of television time bans in all EU-27 Member States.

3.4.1 Shifts in GRPs after introducing a time ban

In Table 10 (middle columns) it is shown what the possible effects of different time bans (e.g. until 22h, 23h etc.) could be on youth exposure (13-17 year olds), assuming that the advertisers find ways to at least make up for the loss in adult GRPs (see Appendix 4 for the detailed calculations). Data presented shows that when advertisers compensate for the loss in adult GRPs a time ban would have a negative effect on youth exposure (age 13-17). Extending a total time ban on alcohol advertising from 21.00h to e.g. 23.00h would lead to a relatively small increase in youth GRPs (15% in 13-17 GRPs), assuming the advertisers will make up for the loss in adult GRPs.

Data presented show that in theory a combination of a strict time ban (till 1h) and a proportional standard could decrease youth exposure by 46%. However, as described in chapter 4, practical implications will diminish the effectiveness of a proportional standard in practice.

Table 10. Change in 13-17 GRPs after 3 different policies (proportional standard of 6%, time bans, and combination of standard and bans)

Hour	Current GRPs		Proportional standard 6%		Different time bans			Prop. standard + time bans	
	13-17	18+	Change 13-17 GRPs	%	Time ban until	Change 13-17 GRPs	%	Change 13-17 GRPs	%
< 21	1.945	4.146			21h	830	+17,7%	-600	-12,8%
21-22	1.030	1.314			22h	384	+8,2%	-759	-16,2%
22-23	847	1.462			23h	716	+15,3%	-754	-16,1%
23-24	529	903			24h	1.998	+42,7%	-754	-16,1%

³ The U.S. standard used to be a fairly meaningless 50% and was lowered in 2003 to a more proportional 30%, see CAMY, 2005. A recent official request by the Federal Trade Commission’s Bureau of Consumer Protection asked the industry to move to 25% in December 2010. The industry declined.

24-01	254	321	01h	2.692	+57,5%	-2.133	-45,6%
01-02	60	59					
> 02	16	25					
Total	4.680	8.231	-1.149	-24,5%			

Note: GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. The number of GRPs is based on data from the Top 3 TV channels most often watched by 13-17 year olds, in two months of 2010. Therefore, the total number of GRPs in these months is in fact higher than depicted here. See Appendix 4 and 5 for the specifications of the effects of the final two policies (different time bans and the combination between a 6% proportional standard and different time bans). Source: Nielsen Media and TNS TV Plan, 2010.

Shifts in advertising are highly likely to occur

It is highly likely that shifts in alcohol advertising will occur after the introduction of a watershed. As an example we can refer to the recent situation in The Netherlands. The watershed of 6.00-21.00 resulted in a shift of the broadcasting of alcohol commercials on television. All commercials that were usually broadcast before 21.00 are now being broadcast after 21.00h and even more (Nielsen Media, 2010; STAP, 2011a). Compared with 2008, when the time ban was not yet in place, in 2010 the number of alcohol commercials after 21.00 has more than tripled. The data revealed that after 21.00h more youngsters are now being reached by more alcohol commercials than before the time ban came into force. In other words, the net effect of the ban has been negative, especially for the 12-17 year olds who see significantly more alcohol ads now, in a shorter period of time. Before 21.00h children do not see any alcohol commercials anymore, but sponsoring of programs is still allowed and made use of frequently.

3.4.2 Summary time bans

To summarize, in Europe, rather than in the U.S., legal time restrictions on alcohol advertising are possible. A majority of 21 out of 27 EU Member States has time or product bans for alcohol advertising on television. Since it is unclear what might happen with the pattern of broadcasting after a watershed comes into force, it is difficult to do firm 'predictions' on the exact effect of a time ban.

However, the data above seem to suggest that extending a total time ban on alcohol advertising from 21.00h to e.g. 23.00h would lead to a relatively small reduction in youth GRPs (-15% in 13-17 GRPs), assuming the advertisers will make up for the loss in adult GRPs. Extending the time ban till a later hour decreases youth exposure more. For example, a time ban till 01h would lead to a reduction of 57,5% in exposure of 13-17 year olds. A possible disadvantage of taking this measure in separation is the fact that a small high risk group of youngsters is still watching late night television without parental control. Research has shown that this is a risk factor for the initiation of (harmful) drinking. For this reason, ideally, a time ban is combined with a proportional standard, to prevent alcohol advertising around programs with a high youth audience composition.

In the next section of the report we will look more into detail in combining a proportional standard with a time ban.

3.5 Combination of proportional standard and time ban

Finally, it is interesting to calculate what the possible effect of a combination of both policies could be. In Table 10 (final columns) the effect of a proportional standard of 6% in combination with different time bans is shown (see Appendix 5 for the specific calculations). Again, also in this analysis the assumption was that the advertisers can and will at least nullify the effect of the policy (compensate the number of adult GRPs lost).

Not unexpectedly, the results reveal that combining the 6% proportional standard with a time ban is more protective than applying both measures separately. Extending the watershed from 21.00h till 01.00h in combination with a 6% standard would reduce youth exposure with 46%, while the per capita adult exposure remains the same (see Table 10).

3.5.1 Summary combination policy

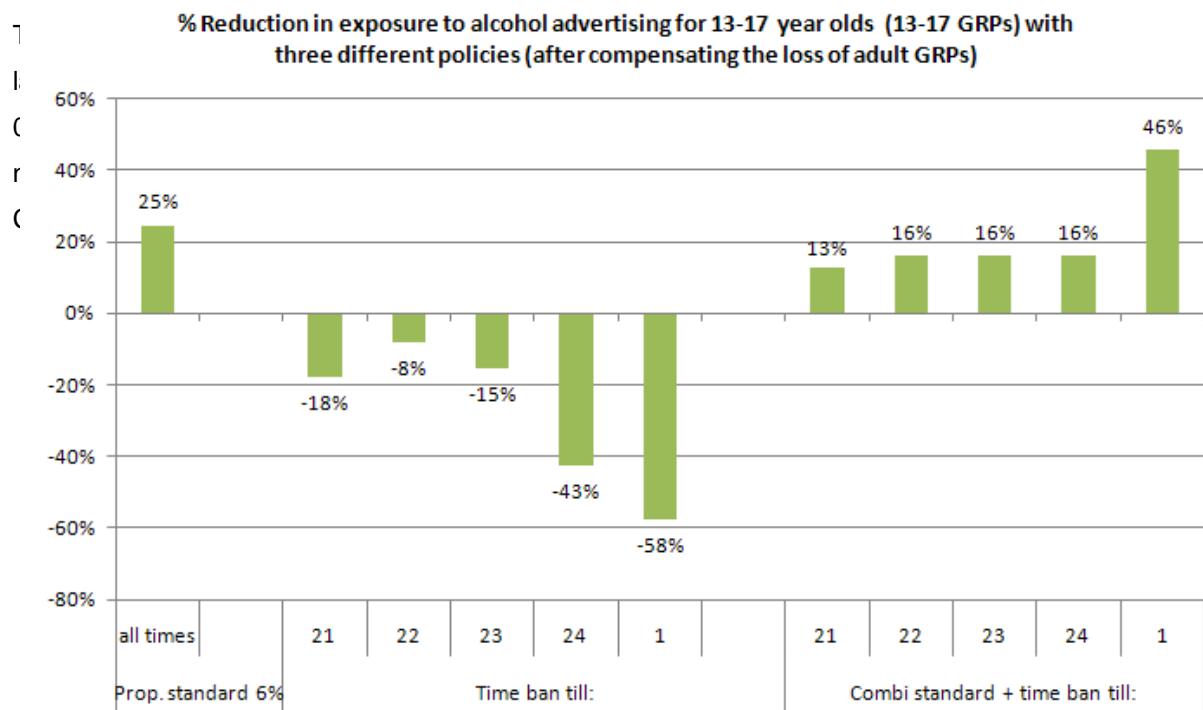


Figure 5. The percentage of reduction in exposure to alcohol advertising (13-17 GRPs) at three different policies: a) implementation of a 6% proportional standard, b) implementation of different time bans, and c) implementation of a combination of a 6% proportional standard and a time ban. In all outcomes an entire compensation for the total number of adult GRPs lost due to the policy has been taken into account. Source: Nielsen Media, 2010.

4. Policy interventions in practice

In this report two possible policy interventions that restrict the volume of televised alcohol commercials have been described: a proportional standard and a watershed. The proportional standard restrict broadcasting alcohol commercials in television programs with a certain amount of minors watching compared to adults (e.g. 30%). A watershed is a time ban that restricts broadcasting of alcohol commercials within certain periods of time (e.g. between 6 am and 9 pm).

Possible theoretical effects of introducing or extending these regulations have been calculated. Practice has already shown (e.g. in the Netherlands) that it is highly unlikely that the advertisers do not change their advertising patterns in order to make up for the lost GRPs. Therefore, also the net effect which results after the policy has been completely nullified (compensated for) has been calculated. In other words, the number of adult GRPs lost will be completely compensated by the advertisers by additional broadcasting of alcohol advertisements. The following assumptions have been described in this report:

Three important assumptions are associated when calculating the possible effects of a watershed:

1. The alcohol companies purchase additional ads in permitted timeslots and on programs with the proper audience composition with the same distribution as current advertising and
2. There is sufficient capacity to absorb the shifting advertising in late night programming and
3. If the alcohol industry increases advertising above and beyond the amount that is shifted to make up for lost reach, it purchases new programs with the same distribution as current programs.

Note: Unless a proportional standard accompanies any time ban, then assumptions #1 and #3 can be called unrealistic and alcohol companies can purchase ads on programs with very high youth audience composition in late night programming.

However, when evaluating these policy interventions, also more practical issues have to be taken into account.

Thresholds in exposure to alcohol advertising

In most European countries alcohol advertisers maintain a threshold of 30% (e.g. EFRD, 2009), in the Netherlands a threshold of 25% is in place (Advertising Code Foundation (2011). Earlier in the report it has been argued that in order to protect young people in the age of 12-17 against exposure to alcohol commercials on television, a much lower proportional standard of 8% has to be implemented.

At this moment, all kinds of thresholds/proportional standards that are in place are implemented in self-regulation. Self-regulation has been proven insufficient in numerous countries such as: Australia

(Jones & Donovan 2002, Jones et al 2008), the Netherlands (Van Dalen & Kuunders, 2003); the United Kingdom (KPMG 2008, Hastings et al 2010); and the United States (Gomes & Simon, 2008) and Brasil (Pinsky & Vendrame 2010). There is a general conflict of interest when economic operators have to restrict their own marketing practices (De Bruijn et al 2010). Implementing a proportional standard in self-regulation is especially problematic since:

- * Monitoring should be done by bodies independent from economic operators;
- * When volume data over a longer period of time is accessible, it is very expensive to purchase these;
- * Monitoring can only be done after possible youth exposure (“when harm is already done”);
- * A system with effective sanctions is generally lacking;
- * A legal back stop is missing;

To implement the proportional standard in legislation and to put effective sanctions in place might be difficult to implement and to enforce since the placement of alcohol commercials will be based on audience estimations.

A time ban on exposure to alcohol advertising

A watershed to restrict the placement of alcohol commercials within certain time periods seems to be easier to implement and to enforce into legislation. As Appendix 3 shows, most European countries make use of this intervention in order to protect young people against exposure to alcohol commercials on television. In other countries, such as France, Sweden and Norway, all televised alcohol commercials are banned.

In practice, however, we see that the alcohol producers change their advertising strategy when confronted with this volume restriction. It is highly likely that shifts in alcohol advertising will occur after the introduction of a watershed. In the calculations made in this report, it is assumed that the number of adult GRPs lost after the introduction of a time slot will be completely compensated by the advertisers by additional broadcasting. However, in practice we can see that this might be an underestimation of the total volume to which young people are being exposed after introducing a watershed.

As an example we can refer to the recent situation in The Netherlands. The watershed of 6.00-21.00 resulted in a shift of the broadcasting of alcohol commercials on television. All commercials that were usually broadcast before 21.00 are now being broadcast after 21.00h and even more (Nielsen Media, 2010; STAP, 2011a). Compared with 2008, when the time ban was not yet in place, in 2010 the number of alcohol commercials after 21.00 has more than tripled. The data revealed that after 21.00h more youngsters are now being reached by more alcohol commercials than before the time ban came into force. In other words, the net effect of the ban has been negative, especially for the 12-17 year olds who see significantly more alcohol ads now, in a shorter period of time. Before 21.00h children do not see any alcohol commercials anymore, but sponsoring of programs is still allowed and made use of frequently.

Changing advertising behaviour

Considering marketing expenditures, alcohol advertising via television is still very important for the alcohol industry. Exposure to televised alcohol advertising will increase alcohol consumption among young people (Anderson et al 2009, Smith & Foxcroft, 2009). In order to restrict youth exposure to televised alcohol marketing clear alcohol marketing regulations are necessary. Since self-regulation is insufficient to protect young people, legislation is necessary (Van den Broeck & De Bruijn 2010). However, since alcohol advertisers change their advertising behavior in order to reach as many people as possible, time slots are suggested to have only limited effects in restricting youth exposure. For this reason, an overall restriction of alcohol commercials and promotion is desired to protect young people against exposure to televised alcohol advertising.

5. Conclusions

Based on the data described above some conclusions can be drawn:

About the general characteristics:

- On the Top-3 most popular TV channels amongst Bulgarian youngsters (bTV, Nova and Diema Family) a total of 2.119 alcohol advertisements was broadcast in May and October 2010.
- The majority (90,0% in May, and 93,5% in October) of Bulgarian alcohol commercials are for beer, followed by wine (9,3% in May), and spirits (0,7 in May, and 6,5% in October). No advertising was found for sweet beverages.
- A total of 13 different producers of alcoholic beverages were active in May and October. Together they advertised for 25 different brands. Most commercials were broadcast by Zagorka (N = 557; 31% of the total number of ads registered in May) and Carlsberg (N=157; 48,6% of the total number of ads registered in October).

With respect to (over)exposure:

- Of all alcohol advertising reaching minors, 48% was seen by the youngest age group (4-12) and 52% by the 'older' minors (13-17). That is, the 'at risk' group of 13-17 year olds is relatively overexposed to alcohol advertising within the group of minors.
- The total number of times a minor was exposed to an alcohol commercial in May and October 2010 on the three selected channels was over 36.5 million.
- Children aged 4-12 saw on average 31,4 alcohol commercials in the selected period, while the older minors (13-17) saw on average 46,8 alcohol commercials. This is close to the number of 55,3 ads seen by the young adults aged 18-34. The 35+ group saw on average the most ads: 93,0.
- The GRP ratios of 0,57 resp. 0,85 indicate that 13-17 year olds are not relatively more exposed to alcohol advertising, per capita, compared to adults (18+) resp. young adults (18-34).
- In almost one fifth of the 2.119 alcohol commercials youth aged 13-17 turned out to be relatively overexposed compared with adults (21,7% overexposure compared with adults (18+) and 31,8% overexposure compared with young adults (18-34)).
- It turns out that approximately 37-58% of the total exposure to alcohol advertising amongst 13-17 year olds is coming from the overexposing ads where youth on a per capita basis receive more exposure compared with (young) adults.

- There were no indications that specific types of beverages generally reached more minors than adults. The GRP ratios for beer, wine, sweet beverages and spirits were below 1. However, one fifth of all ads for beer (20%) were reaching more youth on a per capita basis compared with adults. It turns out that more than half (52-61%) of the total youth exposure to spirits advertising results from overexposing ads. The figures are similar for wine: 56-61% of the total youth exposure to wine advertising results from overexposing ads. Also, when youth 13-17 are compared to young adults, it turns out that more than half (57%) of the total youth exposure to advertising for beer results from the overexposing ads. Finally, on the brand level, one out of 25 brands was found to overexpose youth (13-17) relative to adults (18+). The GRP ratio of 1,23 found for Carlsberg beer indicates that youth were seeing 23% more advertising for the beer brand than adults, on a per capita basis. However, when looking more closely at the percentage of ads which is overexposing youth compared with adults, certain other brands e.g. Radeberger and Shumensko turn out to overexpose youth in more than 40% of their broadcast ads. In total, 9 out of 25 brands generate more than half of their total youth exposure from the overexposing ads. Additional examples of these brands are e.g. Edoardo Miroglio and Shumensko Pivo.

With respect to the 30% threshold:

- The data revealed that the self-regulatory 30%-threshold of the advertisers was not always adhered to well: 16 violations were found in which more than 30% of the viewers of an alcohol ad consisted of minors (aged 4-17). Most violations were found for Heineken Promo, Shumensko pivo and Heineken.
- The present analyses confirmed previous observations (e.g. STAP 2008a; 2008b) that the 25% resp. 30% threshold does not prevent large numbers of minors from being reached by alcohol advertising either. The drawbacks of the 30% threshold arise from the following:
 - The percentage of 30% selected by the European advertisers has been based on the U.S. population, which consists of much more minors than the European populations;
 - The 30% standard concerns all minors (0-17), and is therefore not proportional to the 'at risk' youth population (aged 13-17) who are starting to drink, are more sensitive to advertising and receive more exposure.
 - The 30% standard regarding 'all minors' (aged 0-17) allows the alcohol advertisers to relatively overexpose the 'older' minors (13-17) compared with 'younger' minors (4-12 or even 0-11) without violating the 30% threshold for 'all minors'. The data show that of all alcohol advertising seen by minors, the youngest age group is reached by approximately one half.
 - Low percentages of minors being reached, not violating the 30%-threshold can be much more harmful than (very) high percentages which are violating the threshold. This has everything to do with the absolute number of minors -compared to adults- that are watching. As long as there are more adults watching relative to minors, the

30% threshold will not be reached. This way, the 30% rule allows large absolute numbers of minors to be reached by alcohol commercials without the Code is being violated.

- Based on the 'at risk' population a new proportional standard for Bulgaria has been calculated. According to the TV population data the 'at risk' population of 13-17 year olds comprises 5,7% of the total Bulgarian TV population. A standard of 6% follows the same reasons as the 15% proportional standard that is being advocated for in the U.S. - which is based on the size of the 12-20 age group on the total U.S. population. However, a proportional standard is in practice always implemented in self-regulation which is problematic in terms of effectiveness.
 - Based on the present data, a proportional standard of 6% would have reduced the number of ads seen on average by 13-17 year olds from 47 to 31 (This represents a drop of approximately 34% in the number of ads seen, assuming that no shifts in advertising occur). However, a proportional standard is in practice always implemented in self-regulation which is problematic in terms of effectiveness.

With respect to time bans:

- Legal time restrictions on alcohol advertising are current policy in Europe. A majority of 21 out of 27 EU Member States already has statutory time or product bans for alcohol advertising on television.

It is uncertain what will happen exactly with the pattern of broadcasting after a watershed comes into force. However, the present data suggest that extending the Bulgarian time ban from 21.00h to e.g. 23.00h would lead to a relatively small increase in youth GRPs within the watershed (15% in 13-17 GRPs), assuming the advertisers will make up for the loss in adult GRPs. It is questionable whether it would be possible for the advertisers to completely make up a loss of 2.692 GRPs (between 21.00-23.00) after 01.00h.

Recommendations

The data presented in the report lead to several recommendations:

- **The 25% or 30% threshold adopted in existing self-regulation codes is generally ineffective:**
 - Since the 25% or 30% threshold is based on the composition of the U.S. population rather than the European population, this standard should theoretically be lowered to a more 'proportional standard' for the European population. Since minors aged 12-17 are at risk for (the initiation of) drinking, are more aware of alcohol advertising and are relatively more exposed to alcohol advertising compared with minors aged 6-11, this new proportional standard should theoretically be based on this group (CAMY, 2005; Jernigan & Ross, 2010; National Research Council and Institute of Medicine, 2004; FTC, 2006). For Bulgaria a proportional standard of 6% rather than 30% makes more sense. Introducing an 6% proportional standard could theoretically lead to a reduction in youth exposure of approximately 25%, even if the number of adult GRPs lost by the policy is completely compensated for. However, practical implications (as described in chapter 4) make the effectiveness of a proportional standard questionable.
 - The existing threshold or an adjustment of the standard is to be implemented in self-regulation; Self-regulation has proven to be ineffective. There is a conflict of interest when economic operators have to restrict their own marketing practices (De Bruijn et al 2010). Implementing a proportional standard in self-regulation is especially problematic due to its difficulty of monitoring independently and its enforcement.
 - Another possibility might be to implement a proportional standard in national or European legislation instead of self-regulation. One way is to adjust the European Audiovisual Media Services Directive (AVMSD) to include a *volume* restriction (proportional standard) besides the currently existing article 15 which restricts only the *content* of alcohol advertising on television. Legal sanctions might, however, be difficult to when alcohol commercials are placed on the basis of audience estimations.
 - A possible drawback of a percentage threshold might be the adherence and enforcement of this tightened measure. It is unclear whether it is possible in practice to adhere to a standard of 6% (especially with new television programs of which it is unknown how many minors will be watching). Enforcement of this measure will be rather costly since expensive data need to be bought and analyzed.
- **Extend the statutory time ban. Apply the statutory time ban to all kinds of alcohol and extend its time.** An advantage of a time ban over a proportional standard is that it is easier to adhere to by the advertisers, because it is clear from what time onwards it is allowed to advertise and between which time frames this is not allowed. It is much harder to estimate which programs (and therefore commercials) will reach an audience consisting of more than 6% minors aged 13-17. Furthermore, a time ban is also easier and less expensive to monitor

for third, independent parties. However, if alcohol producers compensate for the loss of adults GRPs by broadcasting more alcohol commercials later at night, extending the time ban could be counterproductive. Consequently a moral appeal on the alcohol producing sector has to be made to urge them not to increase the volume of alcohol advertising at hours outside the timeslot.

- **A third alternative might be to combine a proportional standard with a statutory time ban.** Calculations presented in the current report show that there are theoretical advantages of this combination of interventions. The data reveal that combining an 6% standard with a ban until 1h decrease youth exposure by 47%, while the number of generated adult GRPs remains the same as before the introduction of the combined policy. However, due to the important shortcomings of self-regulations regarding the difficulty of monitoring and enforcement, not much benefits are expected from adding proportional standards in self-regulation next to time ban implemented in legislation.
- **Total ban on alcohol advertising.** The current report has described the large amount of alcohol commercials to which young people are exposed on television in everyday life. Partial volume restrictions are thought to be insufficient to protect this youth exposure due to expected changes in advertising behavior of the alcohol industry after introducing a (extended) watershed. There is a need to restrict the industry's possibilities to reach young people by televised alcohol advertising and promotion. Obviously the most protective measure would be to implement an EU wide, total ban on alcohol advertising. This way issues with regard to the shifting of advertising, cross-border advertising (is allowed, despite national bans) and the occurrence of sponsorship of and product placement in television programs can also be restricted more effectively. Given the undesirable impact of alcohol advertising on the drinking behaviour of youth, the knowledge that alcohol is a carcinogenic (Baan et al., 2007) and addictive substance (technically it is a hard drug) and the harm it causes to society (Nutt et al., 2010), a total ban on advertising for this product will be entirely justified. A total ban can be implemented stepwise, starting with a ban on television⁴ and gradually extending the ban to other media as well. Similar stages have been adopted for the ban on tobacco advertising, which led to a total ban in the European Union, that was implemented in July, 2005. The WHO European Alcohol Action Plan for 2012-2020 (Draft version, 26 April 2011) mentions a total ban on alcohol advertising as the final of four progressive steps to limit the impact of alcohol marketing in order to contribute to a reduction in drinking behaviour of youngsters.
- **Monitoring alcohol marketing.** The research discussed above emphasizes the importance of monitoring alcohol marketing activities of the alcohol industry. Otherwise, one would not

⁴ The total amount of commercials for alcohol on the total number of commercials broadcast in 2010 in the Netherlands was 1,3% (Nielsen Media, 2010). In other words, the lack of advertising expenditures might be relatively easily compensated for by advertisers for other types of products and brands.

obtain more detailed insight into the volume of alcohol advertisements and exposure of young people to these ads. In the Council Conclusions on Alcohol and Health of the Council of the European Union (2009) it is stated:

THE COUNCIL OF THE EUROPEAN UNION: INVITES THE MEMBER STATES TO:

"Ensure that, where in place, self-regulatory standards and codes are developed, implemented and monitored in collaboration with health-promoting entities" (p. 5).

Source: Council Conclusions on Alcohol and Health. 2980th Employment, Social policy, Health and Consumer affairs Council meeting. Brussels, 1 December 2009.

Also the WHO European Alcohol Action Plan for 2012-2020 (Draft version, 26 April 2011) states that: "*Monitoring of alcohol marketing practices is best done when it is the responsibility of an independent body or a government agency, and when it is performed systematically and routinely*" (p.16).

It is therefore recommended that Member States are given the opportunity to continue or start with the monitoring of alcohol advertising and marketing reaching youth in their countries.

6. References

- Advertising Code Foundation (2011).
<http://www.reclamecode.nl/consument/default.asp?paginaID=93&hID=1>, retrieved 09-05-2011.
- Anderson P, de Bruijn A, Angus K, Gordon R, Hastings G. Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. *Alcohol Alcohol* 2009 May-Jun;44(3):229-43.
- Baan et al., (2007). Carcinogenicity of alcoholic beverages. *Lancet Oncology*, 8, 292-293.
- CAMY (2005). Striking a balance: protecting youth from overexposure to alcohol ads and allowing alcohol companies to reach the adult market. Washington D.C.: CAMY.
- CBS (2010). Census data on the Dutch population, retrieved at
<http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7461BEV&D1=a&D2=a&D3=a&D4=l&HDR=T,G3&STB=G1,G2&VW=T>
- Chen, M.-J., Grube, J.W., Bersamin, M., Waters, E., & Keefe, D.B. (2005). Alcohol Advertising: What makes it attractive to youth? *Journal of Health Communication*, 10, 553-565.
- Collins, R.L., Ellickson, P.L., McCaffrey, D., & Hambarsoomians, K. (2007). Early adolescent exposure to alcohol advertising and its relationship to underage drinking. *Journal of Adolescent Health*, 40, 527-534.
- Commission of the European Communities (2006). An EU strategy to support Member States in reducing alcohol related harm.
http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/alcohol_com_625_en.pdf
- COUNCIL OF THE EUROPEAN UNION. Council Conclusions on Alcohol and Health. 2980th Employment, Social policy, Health and Consumer affairs Council meeting. Brussels, 1 December 2009. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/lsa/111638.pdf.
- EFRD (2009). Common Standards for Commercial Communications.
<http://www.efrd.org/communication/docs/EFRD%20CommStand-09-EN.pdf>
- Ellickson, P.I., Collins, R.L., Hambarsoomians, K., & McCaffrey, D.F. (2005). Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction*, 100, 235-246.
- ELSA (2007). Regulation of Alcohol Marketing in Europe. ELSA project overview on the existing regulations on advertising and marketing of alcohol. Utrecht: STAP.
- Engels, R.C.M.E., Hermans, R., Van Baaren, R.B., Hollenstein, T., & Bot, S.M. (2009). Alcohol Portrayal on Television Affects Actual Drinking Behavior. *Alcohol & Alcoholism*, 44, 244-249.
- Federal Trade Commission (2006). RE: Alcohol Reports. Paperwork Comment, FTC File No. P064505. A Communication from the Chief Legal Officers of the Following States: Arizona, Connecticut, Delaware, Hawaii, Idaho, Illinois, Iowa, Maine, Maryland, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, Utah, Vermont, Washington, Wyoming [California subsequently signed on], 8 May 2006. Retrieved April 27, 2011, from <http://www.ftc.gov/os/comments/alcoholmanufacstudy/522852-01287.pdf>

- Gomes L, Simon M. Why Big Alcohol can't police itself: Marin Institute; 2008. Available from: http://www.marininstitute.org/site/images/stories/pdfs/08mi1219_discus_10.pdf
- Hanewinkel, R., & Sargent, J.D. (2009). Longitudinal study of exposure to entertainment media and alcohol use among German adolescents. *Pediatrics*, 123 (3), 989-95.
- Hastings G, Brooks O, Stead M, Angus K, Anker T, Farrell T. Alcohol advertising: the last chance saloon: Failure of self regulation of UK alcohol advertising. *BMJ British Medical Journal (International Ed)*2010;340:184-6.
- Henriksen, L., Feighery, E.C., Schleicher, N.C., & Fortmann, S.P. (2008). Receptivity to alcohol marketing predicts initiation of alcohol use. *Journal of Adolescent Health*, 42, 28-35.
- Jernigan, D.H. (2008). The Extent of Global Alcohol Marketing and Its Impact on Youth.
- Jernigan, D.H. & Ross, C. (2010). Monitoring youth exposure to advertising on television: the devil is in the details. *Journal of Public Affairs*, 10, 36-49.
- Jones SC, Donovan RJ. Self-regulation of alcohol advertising: is it working for Australia? *Journal of Public Affairs*2002;2(3):153-65.
- Jones S, Hall D, Munro G. How effective is the revised regulatory code for alcohol advertising in Australia? *Drug and alcohol review*2008;27(1):29-38.
- Koordeman, R., Anschutz, D.J., van Baaren, R.B., & Engels, R.C.M.E. (2011a). Effects of Alcohol Portrayals in Movies on Actual Alcohol Consumption: An Observational Experimental Study. *Addiction*, 106, 547-554. DOI: 10.1111/j.1360-0443.2010.03224.x
- Koordeman, R., Anschutz, D.J., & Engels, R.C.M.E. (2011b). Exposure to alcohol commercials in movie theatres affects actual alcohol consumption in young adult high weekly drinkers: an experimental study. *The American Journal on Addictions*, 20, 285-291. DOI: 10.1111/j.1521-0391.2011.00134.x.
- Koordeman, R., Kuntsche, E., Anschutz, D.J., van Baaren, R.B., & Engels, R.C.M.E. (2011c). Do we act upon what we see? Direct effects of alcohol cues in movies on young adults' alcohol drinking. *Alcohol and Alcoholism*, advance access published April 14, 2011. Doi: 10.1093/alcalc/agr028.
- McClure, A.C., Stoolmiller, M., Tanski, S.E., Worth, K.A., & Sargent, J.D. (2009). Alcohol Branded Merchandise and its Association with Drinking Attitudes and Outcomes among U.S. Adolescents. *Archives of Pediatrics and Adolescent Medicine*, 163, 211-217.
- Meier P, Booth A, Brennan A, O'Reilly D, Purshouse R, Stockwell T, et al. The Independent Review of the Effects of Alcohol Pricing and Promotion. Part A Report prepared for the Department of Health Stationery Office: London2008.
- National Research Council and Institute of Medicine (2004). Reducing Underage Drinking: A Collective Responsibility. National Academies Press: Washington, D.C.
- Nutt et al., (2010). Drug harms in the UK: a multicriteria decision analysis. *The Lancet*, 376, 1558-65.
- Parliamentary paper 27 565, nr. 77 (2008). Letter of the minister of Health, Welfare and Sports to the House of Commons about the Expert consultation about alcohol advertising (30 October 2008).

- Pasch, K.E., Komro, K.A., Perry, C.L., Hearst, M.O., & 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? *Journal of Studies on Alcohol and Drugs*, 68, 587-596.
- Rowe et al. (2006). A Communication From the Chief Legal Officers Of the Following states: Arizona, Connecticut, Delaware, Hawaii, Idaho, Illinois, Iowa, Maine, Maryland, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, Utah, Vermont, Washington, Wyoming. Alcohol Reports: Paperwork Comment. FTC File No. P064505.
- Science Group of the European Alcohol and Health Forum (2009). Does marketing communication impact on the volume and patterns of consumption of alcoholic beverages, especially by young people? A review of longitudinal studies. Scientific Opinion of the Science Group of the European Alcohol and Health Forum of the European Commission.
- SKO (2010). Jaarrapport. 2010.
- Smith, L.A., & Foxcroft, D.R. (2009). The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies. *BMC Public Health* 2009, 9:51. Doi:10.1186/1471-2458-9-51.
- Snyder, L., Fleming Milici, F., Slater, M., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics and Adolescent Medicine*, 160, 18-24.
- Stacy, A.W., Zogg, J.B., Unger, J.B., & Dent, C.W. (2004). Exposure to televised alcohol ads and subsequent adolescent alcohol use. *American Journal of Health Behavior*, 28, 498-509.
- STAP (2008a). Alcoholreclame in Nederland: Zelf regelen of laten regelen? Utrecht: Dutch Institute for Alcohol Policy (STAP).
- STAP (2008b). Bereik van minderjarigen door alcoholreclame op TV in 2007. Utrecht: Dutch Institute for Alcohol Policy (STAP).
- STAP (2009). Overview TV bans/restrictions (time and product) for alcoholic beverages in EU-27. http://www.alcoholreclame.nl/alcoholreclame/alcoholreclamebeleid_in_nederland/europa.html
- STAP (2011a). Evaluatie van de alcoholreclamebeperking op radio en televisie in 2009 en 2010. Utrecht: Dutch Institute for Alcohol Policy (STAP).
- Van Dalen W, Kuunders M. Don't ask a bird to clip his own wings 2003. Available from: <http://www.alcoholpreventie.nl/bestand/bird.pdf>.
- Van den Broeck, A., & Van den Wildenberg, E. (2011). Report on youth exposure to alcohol commercials on television in Europe. Protocol on how to measure youth exposure. Utrecht: Dutch Institute for Alcohol Policy (STAP)
- Van den Wildenberg, E. (2011). *To appeal or not to appeal: Testing self-regulation of alcohol advertising. Results of the AMMIE-project (Alcohol Marketing Monitoring in Europe)*. Utrecht: Dutch Institute for Alcohol Policy (STAP). Retrieved from: <http://www.eucam.info/eucam/home/ammie-complaints.html>
- Vendrame A, Pinsky I, SOUZA ES. Assessment of self-regulatory code violations in Brazilian television beer advertisements. *Journal of studies on alcohol and drugs* 2010;71(3):445-51.

Appendices

Appendix 1: Number of alcohol commercials per hour of the day in May and Oct 2010

Appendix 2: Violations of the 25% threshold in May and Oct 2010

Appendix 3: Overview of TV bans for alcoholic beverages in EU-27

Appendix 4: GRP shifts after implementing different time bans

Appendix 5: GRP shifts after implementing a proportional standard + time ban

Appendix 1: Number of alcohol commercials per hour of the day in May and Oct 2010

Table 3: Number of ads per hour of the day

Time	May		October	
	N	Percentage	N	Percentage
6:00 - 6:59	42	2,3	1	0,3
7:00 - 7:59	0	0,0	1	0,3
8:00 - 8:59	2	0,1	0	0,0
9:00 - 9:59	6	0,3	0	0,0
10:00 - 10:59	13	0,7	2	0,6
11:00 - 11:59	35	2,0	5	1,5
12:00 - 12:59	118	6,6	11	3,4
13:00 - 13:59	78	4,3	1	0,3
14:00 - 14:59	68	3,8	10	3,1
15:00 - 15:59	91	5,1	16	4,9
16:00 - 16:59	67	3,7	13	4,0
17:00 - 17:59	73	4,1	8	2,5
18:00 - 18:59	117	6,5	21	6,5
19:00 - 19:59	153	8,5	19	5,8
20:00 - 20:59	157	8,8	19	5,8
21:00 - 21:59	185	10,3	40	12,3
22:00 - 22:59	191	10,6	47	14,5
23:00 - 23:59	191	10,6	42	12,9
0:00 - 0:59	117	6,5	29	8,9
1:00 - 1:59	32	1,8	15	4,6
2:00 - 2:59	13	0,7	3	0,9
3:00 - 3:59	10	0,6	6	1,8
4:00 - 4:59	35	2,0	6	1,8
5:00 - 5:59	0	0,0	10	3,1
Total per month	1794	100%	325	100%

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here.

Source: Nielsen Media and TNS TV Plan, 2010

Appendix 2: Violations of the 30% threshold in May and Oct 2010

Brand	Program	Day date	and	Spot time	% of viewers aged 4-17	N aged 4-17
Pirinsko pivo	Advertising block (after Movie) (before News)	29.10.2010		1:34:08	57,2%	4.028
Ledenika beer	Big Brother Family - Live	21.05.2010		12:14:33	52,3%	5.013
Shumensko pivo	News block	29.10.2010		2:11:34	44,4%	4.028
Tuborg	Serial	31.5.2010		14:16:04	43,1%	3 782
Tuborg Heineken promo	Big Brother Family - Live Family	25.5.2010		12:16:57	42,6%	12 619
Pirinsko pivo Heineken promo	Movie	15.10.2010		18:30:50	42,5%	4 286
Yambol grape Merakliysko red wine	Serial	23.5.2010		20:45:03	41,4%	16 956
Shumensko pivo	Big Brother Family Live	13.5.2010		6:40:01	34,9%	3 809
Shumensko pivo promo	Big Brother Family - Live	13.5.2010		5:01:28	34,9%	4 828
Yambol grape Heineken promo	Serial	14.10.2010		0:02:47	33,5%	4 924
Heinken promo	Big Brother Family	31.5.2010		13:46:36	33,0%	3 782
Champion soccer ligue		20.10.2010		5:35:39	32,3%	5 212
Champion soccer ligue Big Brother Family Live		20.10.2010		5:35:47	32,3%	5 212
Ledenika		17.5.2010		12:15:08	31,5%	4 274

Note. The number of violations is based on the data from the Top 3 TV channels most often watched by 13-17 year olds in May and Oct 2010. Therefore, the total number of violations in these months will probably be higher than depicted here. N = absolute number of viewers of the commercial.

Source: Nielsen Media and TNS TV Plan, 2010

Appendix 3: Overview of TV bans for alcoholic beverages in EU-27

Of 27 EU Member States:

- 21 countries have a partial or complete TV ban (time and/or product ban).
- 6 countries have no restrictions on TV at all: Cyprus, Denmark, Germany, Greece, Luxembourg and Czech Republic.

	Country	TV Ban (in statutory or non-statutory regulation)	TV ban?
1	Belgium	Flanders: No alcohol advertising on public service channels. Alcohol advertising is allowed on commercial channels. Wallonia: No alcohol advertising for spirits	YES, partly
2	Bulgaria	No indirect marketing of spirits before 22.00	YES, partly (time and product)
3	Cyprus	No ban on alcohol advertising exists.	NO
4	Denmark	No ban on alcohol advertising exists.	NO
5	Germany	No ban on alcohol advertising exists.	NO
6	Estonia	No alcohol advertising for alcoholic beverages between 7.00-21.00. No (alcohol) advertising on public service channels.	YES, partly (time)
7	Finland	No alcohol ads for mild alcoholic beverages between 7.00-21.00. No alcohol advertising for spirits (> 22%).	YES, partly (time and product)
8	France	No alcohol advertising on TV at all (Loi EVIN).	YES, total
9	Greece	No ban on alcohol advertising exists.	NO
10	Ireland	No alcohol advertising for spirits and premixes (self-regulation)	YES, partly, (product ban in selfregulation)
11	Hungary	No alcohol advertising on public service channels. No alcohol advertising for spirits between 18.30- 21.30 (commercial channels).	YES, partly
12	Italy	No alcohol advertising for spirits between 16.00-19.00 (and for other alcoholic beverages it should be avoided between 16.00-19.00).	YES, partly (time ban on product)
13	Latvia	No alcohol advertising for spirits.	YES, partly (product)
14	Lithuania	No alcohol advertising between 6.00-23.00, except for live and uninterrupted international broadcasts or re-broadcasts of art, culture or sports events. Also names or trademarks may appear during broadcasts and re-broadcasts on an irregular or unexpected basis.	YES, partly (time)
15	Luxembourg	No ban on alcohol advertising exists.	NO
16	Malta	No alcohol advertising between 6.00-21.00.	YES, partly (time)
17	Netherlands	No alcohol advertising between 6.00-21.00. (The new Media law came into force on January 1 st 2009. After a transitional period of 1 year, on January 1 st 2010 it is certain that no more alcohol commercials will be seen between 6.00-21.00. Sponsoring between 6.00-21.00 is still allowed).	YES, partly (time)
18	Norway	Total ban on alcohol advertising, in all media.	YES, total

	Country	TV Ban (in statutory or non-statutory regulation)	TV ban?
19	Austria	No alcohol advertising for spirits. No alcohol advertising for premixes before 19.25.	YES, partly (time and product)
20	Poland	No alcohol advertising for beer between 6.00- 20.00 (except during sporting games). No alcohol advertising for other alcoholic beverages.	YES, partly (time and product)
21	Portugal	No alcohol advertising between 7.00-22.30.	YES, partly (time)
22	Romania	No alcohol advertising for spirits between 6.00-22.00	YES, partly (time ban on product)
23	Slovenia	No alcohol advertising for spirits (< 15%). No alcohol advertising for other alcoholic beverages between 7.00- 21.30.	YES , partly (time and product)
24	Slovak Republic	No alcohol advertising for wine and spirits between 6.00-22.00.	YES, partly (time ban on product)
25	Spain	No alcohol advertising for spirits > 20%. No alcohol advertising for beer before 20.30 (self-regulation). (No time ban yet, but a ban from 6.00-22.00 has been suggested).	YES, partly (time and product)
26	Czech Republic	No ban on alcohol advertising exists.	NO
27	UK	No advertising at all allowed at public channels (therefore, also no alcohol advertising). No ban on alcohol advertising exists on other channels.	YES, partly
28	Sweden	No alcohol advertising for alcoholic beverages >2,25% alc. vol.	YES, total (ban > 2.25%)

Source: Dutch Institute for Alcohol Policy (STAP)

Date latest revision: April 2009

Note: Norway is not a member of the European Union, but has a total ban on alcohol advertising.

Appendix 4: GRP shifts after implementing different time bans

Possible effects of certain time bans (including a compensation for lost adult GRPs).

Current GRPs		Time ban until	GRPs lost due to time ban (cumulative)		Av. ratio 13-17 /18+ after hour	Expected 13-17 GRPs based on shifted 18+ ads	Total GRPs after ban (incl. adult GRP shifts)		Change in 13-17 GRPs compared with present status	
Hour	13-17	18+	13-17	18+		13-17	18+	GRPs	%	
< 21	1.945	4.146	21	1.945	4.146	0,67	2.775	5.510	8.231	830 17,7%
21-22	1.030	1.314	22	2.975	5.460	0,62	3.359	5.064	8.231	384 8,2%
22-23	847	1.462	23	3.822	6.922	0,66	4.538	5.396	8.231	716 15,3%
23-24	529	903	24	4.351	7.825	0,81	6.349	6.678	8.231	1.998 42,7%
24-01	254	321	01	4.604	8.147	0,90	7.296	7.372	8.231	2.692 57,5%
01-02	60	59								
> 02	16	25								
Total GRPs	4.680		8.231							

Note. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here.

Note. the given protective effect of the additional time bans can only occur if no substitution effects arise after the implementation.

Appendix 5: GRP shifts after implementing a proportional standard + time ban

5a. Possible effects of a proportional standard of 6%.

Hour	Current GRPs ¹		Proportional GRPs only ²		GRPs lost due to proportional standard ³	
	13-17	18+	13-17	18+	13-17	18+
< 21	1.945	4.146	1408	3.792	537	354
21-22	1.030	1.314	505	926	525	388
22-23	847	1.462	610	1.282	237	180
23-24	529	903	376	788	153	116
24-25	254	321	116	223	137	99
25-26	60	59	17	39	42	20
> 02	16	25	1	20	15	5
Total GRPs	4.680	8.231	3.033	7.070	1.647	1.161

¹ The total number of GRPs generated per hour. ² GRPs left after introduction of a proportional standard of 6%. ³ The number of GRPs which are lost due to introduction of a 6% proportional standard. It is highly likely that the advertisers will at least try to nullify the number of adult GRPs that are lost by shifting advertising patterns.

5b. Effect of a proportional standard of 6% extended with time bans (including a compensation for lost adult GRPs).

Additional time ban until ⁴	Total displaced 18+ GRPs ⁵	Av. ratio 13-17/18+ after hour ⁶	Expected 13-17 GRPs (based on shifted 18+ ads) ⁷	Net effect of prop. standard + ban + adult GRP shifts ⁸		Change in 13-17 GRPs compared with present status ⁹	
				13-17	18+	GRPs	%
21.00	4.953	0,50	2.455	4.080	8.231	-600	-12,8%
22.00	5.879	0,48	2.800	3.921	8.231	-759	-16,2%
23.00	7.161	0,48	3.416	3.926	8.231	-754	-16,1%
24.00	7.949	0,48	3.791	3.926	8.231	-754	-16,1%
01.00	8.172	0,31	2.528	2.547	8.231	-2.133	-45,6%

⁴ Part b of the table shows possible effects when a proportional standard of 6% is extended with a time ban until a certain hour. ⁵ The total number of adult GRPs that are lost due to a proportional standard of 6% in combination with a time ban until 22h, 23h, etc. It is highly likely that the alcohol advertisers will try to make up for the loss in adult GRPs by changing their advertising patterns. ⁶ The average ratio of the summed proportional GRPs (see table a) for 13-17 versus 18+, after a certain time ban. ⁷ The number of expected GRPs to be generated for 13-17 year olds, based on the total number of displaced adult GRPs * the average ratio after a certain time ban. ⁸ the net effect of a 6% proportional standard + a time ban + total compensation of adult GRPs lost due to the restrictions. The assumption is that the advertisers will at least try to nullify the effect for the lost 18+ GRPs. Therefore, the total number of GRPs after the restrictions always comes down to 8.231, the same number of adult GRPs that are there before any (further) restrictions (see table a). ⁹ The change (decrease) in number of GRPs for 13-17 year olds after compensation for adult GRPs that were lost. The net result is a decrease in the number of youth GRPs, while the number of adult GRPs remains the same as before the restrictions. This is only possible if the advertisers can purchase additional ads in other time slots and programs to make up for the loss.

