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

Volume of youth exposure in Italy

Results of monitoring televised alcohol commercials in Italy in 2010

AMMIE
Alcohol Marketing Monitoring in Europe

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Author:

Tiziana Codenotti
Loredana Faletti
Associazione Eurocare Italia
Via Cavalletto 3 – 35121 Padova
Italy
+39 049657545
info@eurocareitalia.org
www.eurocareitalia.org

Editing and contact person: Avalon de Bruijn (adebruijn@eucam.info)
European Centre for Monitoring Alcohol Marketing (EUCAM)

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Contact details:
Dutch Institute for Alcohol Policy (STAP)
Postbus 9769
3506 ET Utrecht
+31306565041
info@stap.nl
www.stap.nl

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Summary

I) 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. These effects of alcohol advertising have been found on the *long term* (longitudinal studies; see Anderson et al., 2009 and Smith & Foxcroft, 2009 for reviews) as well as on 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, which was started in 2009 as alcohol marketing was not yet monitored systematically and independent from commercial interest in most European Member States, although the topic is an important one in the EU Alcohol Strategy (Commission of the European Commodities 2006). 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 Italy in 2010.

At the moment, Italy has one regulation that restricts the volume of alcohol advertising: a statutory time ban on alcohol commercials limited only to spirits on TV between 16.00-19.00 .

II) Method

Via Nielsen Media data on alcohol commercials were bought. For Italy AGB Nielsen provided the data. 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 time slot in the 24 hours, although there is the time ban for spirits between 16.00-19.00, in 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 and finally the possible effects of the implementation of a stricter self-regulatory percentage threshold or an extension of the existing watershed.

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

III) Results

Characteristics

A total of 1891 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 = 1312). Alcohol

advertising appears most frequently on Sunday in both months (N = 397). The largest amounts were advertised between 23.00h and 01.59h. The majority (75%) of Italian alcohol commercials are for beer in May, whereas vermouth cider alcopops and other alcoholic beverages under 15% are the majority in October (48%). A total of 12 different producers of alcoholic beverages were active both in May and October. Together they advertised for 23 different brands. Most commercials were broadcasted by Heineken (N = 440; 33.8% of the total number of ads registered, 437 concentrated in May).

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 of all alcohol advertising impressions seen by minors, 54% went to the youngest age group (4-12) and 46% to the 'older' minors (13-17). On average, most alcohol ads were seen by adults of 35 years and older (on average 54-60 alcohol commercials per person in two months time, assuming a 90-100% reach of alcohol advertising), followed by young adults (18-34) who saw on average 43-45 alcohol ads per person. A child aged 4-12 saw on average 28-31 alcohol commercials, while the 'at risk' group of 13-17 (just starting to drink), saw on average 42-46 alcohol commercials per youngster. In other words, on average, 13-17 year olds – who are not yet legally allowed to buy alcohol – are exposed to more than one alcohol commercial every other day (based on data from 3 TV channels).

The average number of 42-46 ads seen by youngsters aged 13-17 is almost the same as the average 43-45 ads seen by the young adults (aged 18-34) than to the average of 28-31 ads seen by the youngest children (aged 4-12).

The GRP ratios[1] of 0,81 resp. 0,97 indicate that in general 13-17 year olds were not relatively more exposed to alcohol advertising compared to adults (18+) resp. young adults (18-34). However, although the ratios are below 1, still almost more than one third (35% and 37%) expose more youth relative to adults. Similar results are found when looking at specific beverages types and specific brands. The GRP ratios for beer is above 1 (13-17/18-34), whereas for beer (13-17/18+), wine, sweet beverages and spirits were all below 1. Additionally, more than a third of all ads for beer (around 39%), spirits (around 38%) and sweet beverages (around 32%) were reaching more youth on a per capita basis compared to adults. It turns out that more than half (47-50%) of the total youth exposure to spirits advertising results from overexposing ads. Also, when youth 13-17 are compared to young adults, the data reveal that more than half (54,1%) of the total youth exposure to advertising for sweet beverages results from overexposing ads.

Finally, on the brand level, four out of 23 brands were found to overexpose youth (13-17) relative to adults (18+) and 9 were found to overexpose youth (13-17) relative to young adults (18+34) in

[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.
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.

general. The GRP ratio of 1,33 found for Artic Vodka indicates that youth were seeing 33% more advertising for the vodka brand than adults, on a per capita basis. However, when looking more closely at the percentage of ads which is overexposing youth compared to adults, it turns out that more than half of the brands (16/23) generate more than half of their total youth exposure from the overexposing ads.

Self-regulatory 30% threshold

The alcohol advertisers included a so called "30% threshold" in some European countries in their voluntary codes in order to prevent too much minors from being reached by alcohol advertising.

Even though Italian self-regulation code does not mention the threshold, several issues regarding the 30% 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, it 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 25% or the 30% threshold (but in fact reach low absolute numbers of minors). Third, it is not proportional to the 'at risk' youth population (aged 13-17) who are just starting to drink, are more sensitive to advertising and see more ads.

A 'proportional' standard applicable to the age group most at risk of underage drinking 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; Rowe et al. 2006). The 25% or 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 5% is proposed for Italy . This is based on the Italian 'at risk' population of 13-17 year olds which comprises 4,9% of the entire Italian TV population (AGB Nielsen, 2010). This new standard is similar to 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.

Introducing a 5% proportional standard could lead to a reduction in youth exposure of approximately 38%, even if the number of adult GRPs lost by the policy is completely compensated for.

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). Of course 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 Italian data reveal that combining an 8% proportional standard with a time ban generates the largest effects in preventing youth exposure. The combination of an 5% standard with a ban until 23.00 can almost cut youth exposure by a third (from 4.209 youth GRPs to 2.887 GRPs; -31,4%), while the number of generated adult GRPs remains the same as before the introduction of the combined policy.

IV) 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 5% with a statutory time ban (until 24h) can theoretically cut youth exposure by 5%*** 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 behaviour 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 Italian 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 Effects of alcohol advertising on the short term

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 type 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 'censured' 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).

1.2 Italian regulations on the volume of alcohol advertising

1.2.1 Statutory regulation

Since 2001, the statutory regulation Law on Alcohol and Alcohol Related problems n. 125/2001 includes a time ban between 16.00 and 19.00 only for spirits: *Art. 13, Par. 4: Radio and television advertisement of spirits is forbidden between 4 p.m. and 7 p.m.* Sponsoring of programs by alcohol advertisers of all beverages within the watershed is still allowed.

1.2.2 Self regulation

No reference to any volume restriction is found in the Advertising Self-Regulation Code of the Institute for Advertising Self-Regulation (IAP). Self regulation, or non-statutory regulation, are 'voluntary' rules that are developed by the advertisers themselves in order "to act and make sure that all marketing be honest, truthful and proper and carried out as a service for the information of consumers", as is stated on the website of the IAP. In Art. 22, which refers to alcoholic beverages, regulations deal only with content issues, leaving aside the question of a given threshold for the protection of minors, as happens in many other European counties.

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 another AMMIE report ("*Report on complains and the complaining system in Italy* "), 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 broadcasted 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. Although Italy does not have any threshold, would a 30% threshold be effective to protect 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 (in The Netherlands). The Italian data were provided by Nielsen Italy (AGB Nielsen). This report will only focus on the Italian data, but the method used is similar for all countries.

2.1 Data

The data that were bought comprised the following elements:

- Data from the Top 3 TV channels watched most by children aged 13–17 that were allowed to broadcast alcohol advertisements;
- Data on TV alcohol advertising on the 24 hours in the months May and October 2010;
- The variables delivered per alcohol commercial were: date and day of the week, channel, time of broadcasting of the spot, duration of the spot, the TV program (before and after the spot), name of producer, 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 the Italy 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 of 18 and older watching (18+), the number of people between the age of 18-34 watching (18-34) and the number of people of 35 and older watching (35+).

Some notes to the Italian data:

- In Italy television viewing behaviour is registered from the age of 4 years, like Germany and Bulgaria. In the other AMMIE countries this age is 6 years (The Netherlands) or even 3 years (Denmark).
- The Italian data on minors is divided into the groups ages 4-12, 13-17.
- The analyzed data come from the Top 3 TV channel watched by most 13-17 year olds and only two months (May and October). This means that the project findings 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 the report as the ‘reference group’ since the data are based on television viewing behaviour. 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 ISTAT data (National Institute of Statistics) and give an indication of the total number of Italian inhabitants (by age group) at a certain time (in Italy this refer to census data 2010. The census data are updated once a year.

In Table 1 the size of both the TV universe as well as the census data have been provided for October 2010, including the distribution over all relevant age groups. As can be seen, the Italian TV universe and the census data are very similar.

Table 1. Size and distribution of the TV population and the Italian population

Age group	TV Population (N)*	Percentage	Italian population (N) (census data)**	Percentage
4+	57.777.622	100,0%	58.062.788	100,0%
4-17	7.826.600	13,5%	7.950.085	13,7%
4-12	4.998.138	8,7%	5.081.145	8,8%
13-17	2.828.462	4,9%	2.868.940	4,9%
18+	49.951.022	86,5%	50.112.703	86,3%
18-34	11.288.854	19,5%	12.044.162	20,7%
35+	38.662.168	66,9%	38.068.541	65,6%

*Source:AGB Nielsen 2010.
** Data retrieved from ISTAT 2010 (http//demo.istst.it).

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 -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 examples 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).

All data sets and calculations as well as the numbers presented in the final reports were checked by STAP and the Johns Hopkins Bloomberg School of Public Health in order to exclude the risk at errors or typos.
For further details on the methods the reader is referred to the AMMIE Volume protocol (Van den Broeck & Van den Wildenberg, 2011).

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 have tested the impact of enforcing different threshold restrictions, taking into account that no threshold is mentioned in the Italian Self-Regulation Code.
- *Effect of a watershed.* Finally we have tried 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 method section, the data that were bought comprised the Top 3 channels most often watched by 13-17 year olds in Italy. In May as well as October 2010 this turned out to be the channels RAI1, Canale5, Italia1. In May a total of 1312 alcohol commercials was broadcasted on these three channels. The total number in October was 579, which is about half the ads broadcaster in May.

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 Sunday.

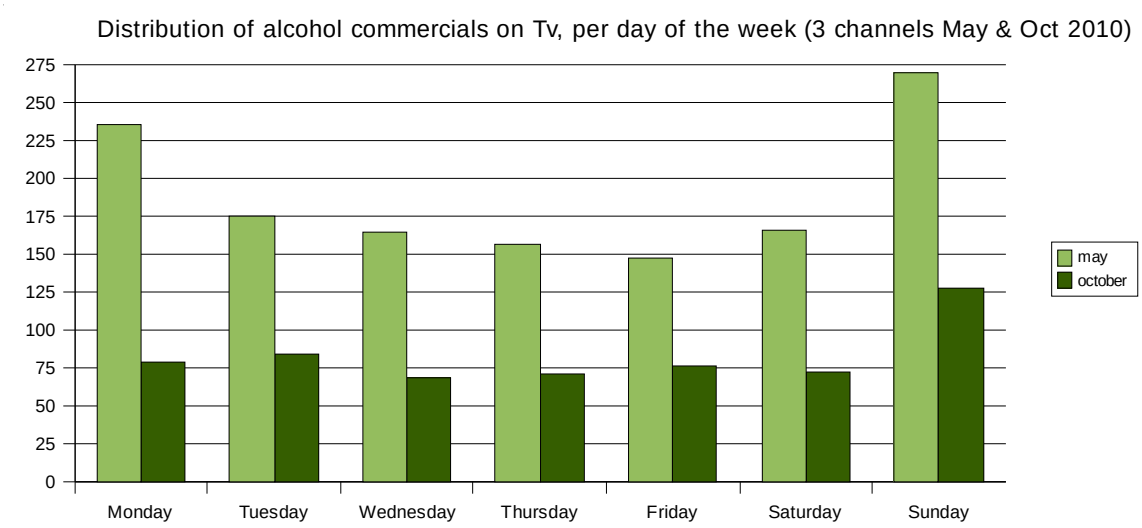

Figure 1. *Note*. The number of ads in these two months is based on the Top 3 TV channels most watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here. Source: AGB Nielsen 2010

3.1.2 Number of ads per hour of the day

Since 2001, the statutory regulation Law on Alcohol and Alcohol Related problems n. 125/2001 includes a time ban between 16.00 and 19.00 only for spirits: *Art. 13, Par. 4: Radio and television advertisement of spirits is forbidden between 4 p.m. and 7 p.m.* The majority of the alcohol advertising takes place between 23.00-02.00 (see Figure 2).

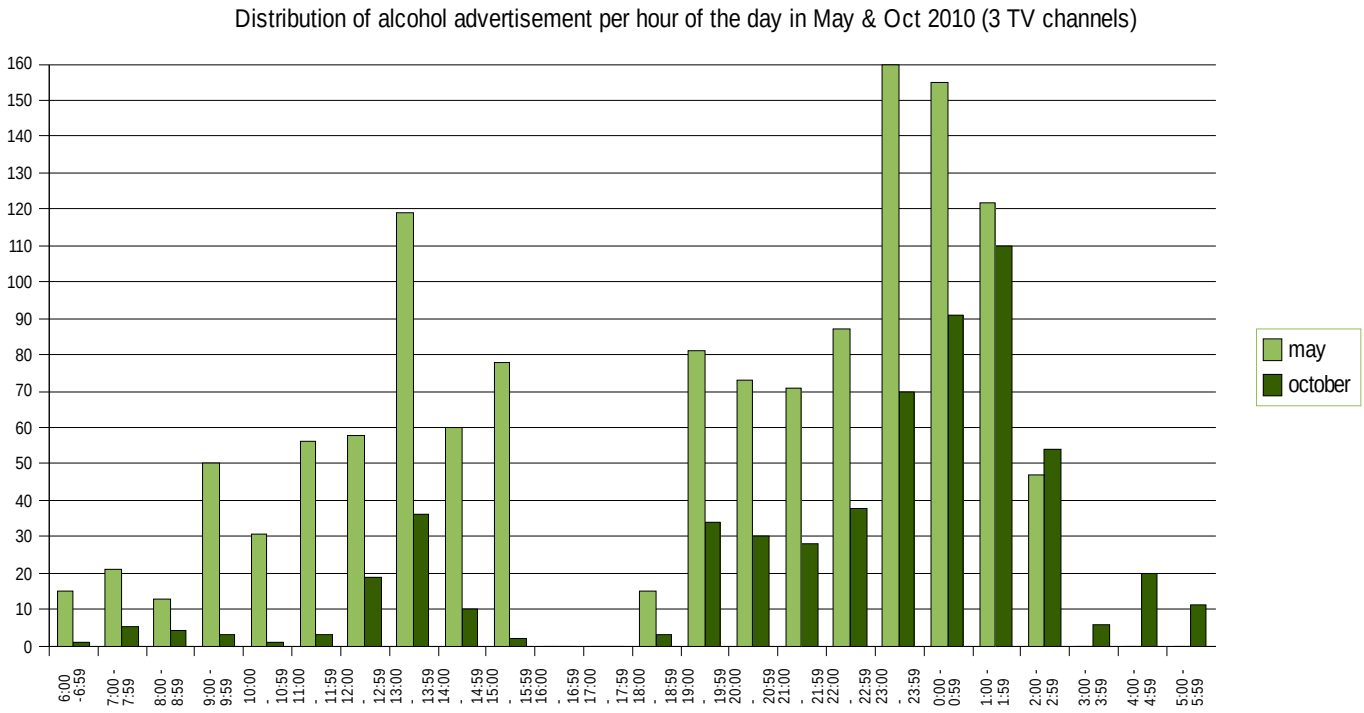

Figure 2. *Note*. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds. Therefore, the total number of ads in these months is in fact higher than depicted here. Source:AGB Nielsen 2010.

In May more or less 33% of the advertising took place between 23.00-01.59. A similar amount of alcohol ads is found between 13.00-13.59 (absolute number: 119). In October the same high concentration of alcohol ads between 23.00 and 01.59 is found: considering that the total number of ads in October is much lower than in May (579 vs 1312), the percentage between 23.00 and 01.59 is about 46%.

No violation of the time ban for spirits between 16.00 and 19.00 was found: the ads broadcasted between 17.59 and 18.59 in May (15) and October (3) are beers and sweet beverages. For the exact number of alcohol commercials per hour of the day see Appendix 1.

3.1.3 Number of alcohol ads per product category

With respect to type of alcoholic beverage for which is being advertised, it becomes clear that globally for the two months beer advertising prevails in Italy, although with a significant difference between the two months: 75,2% in May and 12,3% in October (see Table 2). These findings seem to indicate a seasonal relation between the kind of alcoholic beverages and the promotional time of the year. In details, beer is prevalent in May with very high numbers of alcohol ads (986), whereas the product category *(Sweet) beverages* has the highest percentage in October (278; 48%).

Table 2. Number of ads per product category

Product category	May		October		Total May + Oct	
	N	Percentage	N	Percentage	N	Percentage
Beer	986	75.2%	71	12,3%	1057	56%
Wine*	224	17,1%	278	48,0%	6	0,4%
(Sweet) beverages*	43	3,3%	168	29,0%	211	11,2%
Spirits	59	4,5%	62	10,7%	121	6,2%
Total	1312	100%	579	100%	1891	100,0%

* This category comprises: Vermouth, Cider, Alcopops and/or other (sweet) alcoholic beverages < 15%. *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: ABG Nielsen 2010

3.1.4 Number of ads per alcohol producer and brand

A total of 16 different producers of alcoholic beverages were active in May and October. Together they advertised for 23 different brands (see Table 3 for a complete overview). Most commercials were broadcasted by Heineken (N = 440), for five different brands, namely: Dreher Beer, Heineken Beer, Heineken Draughtken Beer, Moretti Baffo D'Oro Beer and Moretti Beer. The commercials by Heineken covered almost 33.83% of the total number of alcohol commercials (see Figure 3). The second largest producer was Barbero 1891 with just a small difference from Heineken in terms of percentage (33.39% of the total). Barbero 1891 broadcasted 271 commercials in total, for the brand Aperol Aperitivo. Inbev Italia, Forst, Campari and Ceres follow with very similar absolute numbers (from 184 to 155 ads in the two months).

Depending on the season (spring/summer or fall/winter) different brands are being advertised for more or less (see Table 3). Brands for which was advertised the most in May 2010 were three different brands of beer: Becks Next Beer (184) Forst Beer (169) and Heineken Draughtken Beer (162). Brands that was advertised most for on the particular channels in October 2010 were Campari Bitter (140) and Aperol Aperitivo (132).

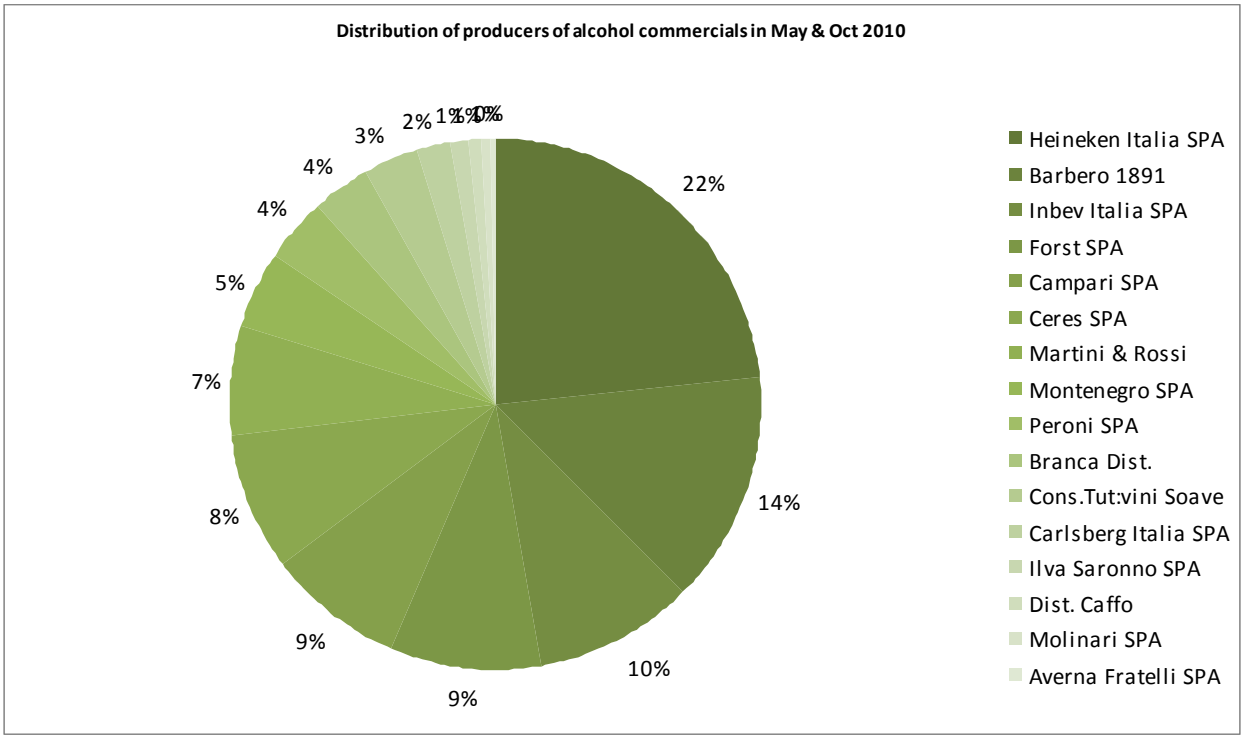

Figure 3. *Note*. The number of ads in these two months is based on the Top 3 TV channels most often watched by 13-17 year olds). Therefore, the total number of ads in these months is in fact higher than depicted here. Source: AGB Nielsen 2010.

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
Averna Fratelli SPA	3	0,0%	Amaro Averna	0	0,0%	3	0,5%
Barbero 1891	271	14,9%	Aperol Aperitivo	139	10,6%	132	22,8%
Branca Dist.	70	3.8%	Fernet Branca Amaro	0	0,0%	70	12,1%
Campari SPA	162	8.9%	Campari Bitter	22	1,7%	140	24,2%
Carlsberg Italia SPA	37	2.0%	Corona Extra Beer	19	1,4%	2	0,4%
			Tuborg Light Beer	16	1.2%	0	0,0%
Ceres SPA	155	8,5%	Ceres Beer	92	7,0%	63	10,9%
Cons:Tut:Vini Soave	62	3,4%	Soave Superiore Vino	0	0,0%	62	10,7%
Distilleria Caffo	16	0,9%	Vecchio Amaro del Capo	16	1,2%	0	0,0%
Forst SPA	169	9,3%	Forst Beer	169	12,9%	0	0,0%
Heineken Italia SPA	440	24,2%	Dreher Beer	92	7,0%	0	0%
			Heineken Beer	9	0,7%	3	0,5%
			Heineken Draughtken Beer	162	12,3%	0	0,0%
			Moretti Baffo D'Oro Beer	80	6,1%	0	0,0%
			Moretti Beer	94	7,2%	0	0,0%
Ilva Saronno SPA	21	1,2%	Artik Vodka	21	1,6%	0	0,0%
Inbev Italia SPA	184	10,1%	Becks Next Beer	184	14,0%	0	0,0%
Martini & Rossi	128	7,0%	Martini Rosato	63	4,8%	0	0,0%
			Martini Rosato Prosecco	59	4,5%	0	0,0%
			Martini Gold Dolce & Gabbana	0	0,0%	6	1,0%

Molinari SPA	12	0,7%	Molinari Sambuca	0	0,0%	12	2,1%
Montenegro SPA	89	4,9%	Amaro Montenegro	6	0,5%	83	14,3%
Peroni SPA	72	4,0%	Peroni Beer	69	5,3%	3	0,5%
Total	1891	100%		1312	100%	579	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. AGB Nielsen 2010

3.1.5 Summary characteristics

To sum up, a total of 1.891 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 = 1312). The favourite day for alcohol advertising appears to be Sunday. Advertising took place in the 24 hours (except between 16.00-17.59). The majority (56%) of Italian alcohol commercials are for beer, followed by wine (26,6%), sweet beverages (11,2%) and spirits (6,2%). A total of 16 different producers of alcoholic beverages ;were active in May and October. Together they advertised for 23 different brands. Most commercials were broadcasted by Heineken (N = 440).

3.2 Exposure to alcohol advertising

In this section we will look more in details into 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. Advertising amongst minors

The total number of times a minor aged 4 to 17 was exposed to an alcohol commercial in the selected period on the Top 3 channels was over 261 million. In other words, 261 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 261 million minors were exposed. One person can be exposed several times, while others have not been reached at all. But one can conclude that 261 million times 'an Italian minor saw a commercial'.

Of all alcohol advertising impressions that were seen by minors (aged 4-17), the youngest age group of 4-12 received 54%, whereas the oldest group 13-17 received 46% of all alcohol advertising impressions.

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.

Average exposure: GRPs

The *total* number of GRPs per age group (Table 4, column 2) are calculated by dividing the total number of impressions or exposures (e.g. 261 million in the case of 4-17 year olds) by the size of the TV population of that particular age group (about 7.8 million in the case of 4-17 year olds), times 100 . In order to get to the *average* number of alcohol commercials a person in a specific age group was exposed to (columns 3 and 4)), the total number of GRPs has been divided by 100 (assuming a 100% reach; Jernigan & Ross, 2010) and by 90 (final column; assuming a more realistic reach of 90%.

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

Age group	GRPs*	Average number of exposures per person in the age group (GRP/100)**	Average number of exposures per person in the age group (GRP/90)**
4+	4.948,95	49,5	55,0
4-17	3.330,09	33,3	37,0
4-12	2.827,97	28,3	31,4
13-17	4.209,14	42,1	46,8
18+	5.205,00	52,0	57,8
18-34	4.325,56	43,3	48,1
35+	5.466,49	54,7	60,7

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: AGB Nielsen 2010.

From Table 4 it becomes clear that the subgroup aged 35 and older (35+) generated the most GRPs in the months May and October 2010 (a total of 5.466,49 GRPs). Assuming a 90-100% reach, this equals the exposure to on average 54-60 alcohol commercials per person (on the three selected channels)). This is slightly more than the age group of 18-34 (young adults) who generated 4.325,56 GRPs. Applying the same assumption of 90-100% reach, this equals on average 43 to 48 alcohol ads per young adult in two months time.

When we look at the *underage viewers*, the group of 4-17 year old generated 3.330 GRPs. With the same assumption of reach, a minor would have been exposed by 33 to 37 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 2.827,97 GRPs, which equals to an average of 28 to 31 ads per child. However, the 'at risk' group of 13-17 (just starting to drink), generated 4.209,14 GRPs, which would roughly equal to an average of 42 to 46 alcohol commercials per person. This number of 42 ads is closer to the number of ads seen by the young adults (18-34, who saw 43 ads) than to the number of ads seen by the youngest children (4-12, who saw 28 ads).

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.
- We use the simplifying assumption that the reach of alcohol advertising within the selected period was 90- 100%. Assuming a reach of 100% 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 to 91%. N.B. Using a 100% reach instead of a lower, and more realistic, reach this leads to an *under*estimation 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 42 commercials, but 46). Given this practical issue, the average numbers 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 46% in Italy, 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 is shown that both GRP ratios are lower than 1 (0,81 resp. 0,97). 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 81% of the exposure of adults (18+) and 97% of the exposure of young adults (18-34). In other words, for every 10 alcohol ads seen by (young adults) youth aged 13-17 see 8 to 9 alcohol ads.

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+	0,81	35%	54,2%
13-17 / 18-34	0,97	37%	59,9%

*GRP ratio = Gross Rating Points ratio: the total number of GRPs for age group 12-17 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: AGB Nielsen 2010.

Percentage of youth exposure

Although the GPR ratios are below 1, the data show that more than one third (35-37%) of the 1.891 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 35 % of all commercials being broadcasted 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: 37% of the commercials exposed relatively more 12-17 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 more than half (54,2 - 59,9%) 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 for the Italian data this is true in only one case: the GRP ratios for beer is above 1 in the overexposure 13-17 / 18-34. This is an indication that youth aged 13-17 are slightly exposed to commercials for beer.

Table 6. Exposure per product category

	GRPs			GRP ratio		% Overexposing ads		% Exposure from overexposure	
Category	**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	2.499	2.802	2.455	0,89	1,02	39,5%	39,8%	58,7%	63,2%
Wine*	164	260	206	0,63	0,80	19,0%	28,1%	38,3%	47,1%
(Sweet) beverages**	1.096	1.476	1.194	0,74	0,92	31,7%	32,3%	49,2%	54,1%
Spirits	450	667	470	0,67	0,96	29,9%	38,9%	47,1%	60,0%
Total	**4.209**	**5.205**	**4.326**	**0,81**	**0,97**	**35,0%**	**37,0%**	**54,2%**	**59,9%**

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.. **This category comprises: Vermouth, Cider, Alcopops and/or other (sweet) alcoholic beverages < 15%. 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: AGB Nielsen 2010.

GRP ratio

The highest GRP ratio was fund for beer (1,02) The GRP ratios for exposure of 13-17 year olds compared with adults resp. young adults to beer ads were 0,89 resp. 1,02. Thus, for every 10 beer commercials a (young) adult was exposed to, a 13-17 year old saw 9 to 10 of these. The same holds more or less for sweet beverages. For spirits, youth see approximately 7 ads for every 10 ads seen by (young) adults.

Percentage of youth overexposure

The percentages of overexposing ads of 13 to 17 year olds compared to adults are highest among the category of beer (approx. 40%), sweet beverages (approx. 32%) and lowest for the category of wine ads (approx. 19%). The number of overexposing ads for spirits lies somewhere in between (approx. 30%).

Percentage of youth exposure resulting from overexposing ads

The final column in Table 6 reveals that almost half (wine) to more than half (beer and 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 (54,1%) of the total youth exposure to advertising for sweet beverages 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 exposure relatively more minors than adults? In Table 7 all 23 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
APEROL APERITIVO	569	737	617	0,77	0,92	33,9%	33,2%	51,8%	54,8%
ARTIC VODKA	53	40	38	1,33	1,40	52,4%	61,9%	74,6%	85,6%
AVERNA AMARO	9	20	9	0,44	0,95	0,0%	33,3%	0,0%	24,1%
BECK'S NEXT BIRRA	465	506	424	0,92	1,10	38,0%	45,1%	60,0%	74,5%
CAMPARI BITTER	340	423	362	0,80	0,94	35,2%	34,6%	52,0%	55,0%
CERES BIRRA	370	462	398	0,80	0,93	40,6%	36,1%	46,8%	44,8%
CORONA EXTRA	60	57	48	1,06	1,24	57,1%	61,9%	63,9%	81,4%

BIRRA									
DREHER BIRRA	251	257	250	0,97	1,00	46,7%	42,4%	67,4%	65,1%
FERNET									
BRANCA AMARO	216	256	211	0,84	1,02	40,0%	42,9%	55,1%	61,2%
FORST BIRRA	385	418	399	0,92	0,96	37,9%	37,9%	60,7%	60,8%
HEINEKEN									
BIRRA	30	92	45	0,32	0,66	0,0%	0,0%	0,0%	0,0%
HEINEKEN									
DRAUGHTKEG									
BIRRA	398	327	329	1,22	1,21	46,9%	46,9%	74,6%	78,8%
MARTINI GOLD									
DOLCE&GABBA									
NA	12	27	16	0,46	0,77	16,7%	16,7%	10,3%	29,1%
MARTINI									
ROSATO	175	290	199	0,60	0,88	14,3%	23,8%	37,9%	51,9%
MARTINI									
ROSATO-									
PROSECCO	122	212	153	0,57	0,79	13,6%	23,7%	27,5%	43,6%
MOLINARI									
SAMBUCA	21	23	19	0,92	1,10	33,3%	25,0%	69,8%	63,0%
MONTENEGRO									
AMARO	147	309	187	0,48	0,79	22,5%	36,0%	26,3%	51,2%
MORETTI BAFFO									
D'ORO BIRRA	163	167	153	0,98	1,07	40,0%	38,8%	60,5%	65,2%
MORETTI BIRRA	198	238	209	0,83	0,95	35,1%	30,9%	51,9%	50,0%
PERONI BIRRA	124	227	156	0,55	0,80	20,8%	26,4%	32,0%	42,9%
SOAVE									
SUPERIORE									
VINO C.COL	43	48	53	0,89	0,80	24,2%	32,3%	69,0%	57,0%
TUBORG LIGHT									
BIRRA	56	52	43	1,09	1,32	56,3%	68,8%	65,8%	87,2%
VECCHIO									
AMARO DEL									
CAPO AMARO	4	18	6	0,21	0,61	0,0%	18,8%	0,0%	44,1%
Total	**4.209**	**5.205**	**4.326**	**0,81**	**0,97**	**35,0%**	**37,0%**	**54,2%**	**59,9%**

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: AGB Nielsen 2010.

GRP ratios

As becomes clear from the data, 4 brands show a GRP ratio bigger than 1 in both ratios 13-17/18+ and 13-17/18-34, specifically 3 beer brands (Corona Extra, Heineken Draughtken and Tuborg Light) and 1 spirit brand (Artik Vodka). Moreover, 5 other brands show a GPR ratio of 1 or more in the ratio 13-17/18-34, 3 beer brands (Becks Next, Dreher and Moretti Baffo D'Oro and 2 spirit brands (Fernet

Branca Amaro and Molinari Sambuca). The highest GPR ratio of 1,40 is resulted for Artic Vodka, which indicates that youth were seeing 40% more advertising for Artic Vodka than adults on a per capita basis.

Brands with a relatively low GRP ratio ('over exposing' adults compared with youth) are e.g. Vecchio Amaro del Capo (ratio = 0,20) and Heineken Beer (ratio = 0,32).

Percentage of youth overexposure

When looking more closely at the percentage of ads which are overexposing youth compared to adults, brands with a relatively low GRP ratio e.g. Martini Gold Dolce&Gabbana and Martini Rosato also have a relatively low percentage of ads that overexpose youth (between 16% and 23%). However, other brands e.g. Corona Extra Beer and Tuborg light Beer overexpose youth more than 50% of their broadcast ads.

Percentage of youth exposure resulting from overexposing ads

After calculating the percentage of youth exposure resulting from overexposing ads, it turns out that more than half of the brands (16/23) generate more than half of their total youth exposure from the overexposing ads (see final column, Table 7). It concerns the following brands: Aperol APeritivo, Artic Vodja, Becks Next Beer, Campari Bitter, Corona Extra Beer, Dreher Beer, Fernet Branca Amaro, Forst Beer, Heineken Draughtkeg Beer, Molinari Sambuca, Montenegro Amaro, Moretti Baffo D'Oro beer, Peroni Beer and Soave Superiore Wine**.**

3.2.5 Summary exposure data

Taken together, of all alcohol advertising reaching minors, 54% is seen by the youngest age group (4-12) and 46% is seen by the 'older' minors (13-17). Children aged 4-12 generated 2.827 GRPs which equals to an average of 28 to 31 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 4.209 GRPs which would roughly equal to an average of 42-46 alcohol commercials per person. In other words, on average a 13-17 year old saw at least more than one alcohol commercial every other day (based on the dta from 3 TV channels). The number of ads seen by the 13-17 years olds is closer to the number of ads seen by the young adults (18-34) who saw approximately 43 to 48 alcohol ads (4.325 GRPs) than to the number of ads seen by the youngest children (4-11).

GPR ratios – comparing the amount of exposure by youth versus adults – were below zero, indicating that in general youth were not overexposed compared with adults. The GRP ratio of 0,81 resp. 0,97 indicate that for every 10 ads seen by an adult (18+) resp. young adults (18-34), youth aged 13-17 saw approximately 8 to 9 ads. Although the GPR ratio are below 1, the data show that in more than a third (35% and 37%) of the 1891 alcohol commercials youth aged 13-17 were relatively overexposed compared with adults resp. young adults. It turns out that more than half (54,2% - 59,9%) of the total exposure to alcohol advertising among 13-17 year olds is coming from the overexposing ads where youth on a per capita basis receive more exposure compared with (young) adults.

When looking at specific **beverages types** and specific brands, the GRP ratios for beer is above 1 in the overexposure 13-17 / 18-34. Additionally, more than a third of all ads for beer (around 39%),

spirits (around 38%) and sweet beverages (around 32%) were reaching more youth on a per capita basis compared to adults. It turns out that more tan half (47-50%) of the total youth exposure to spirits advertising results from overexposing ads. Also, when youth 13-17 are compared to young adults, the data reveal that mre than half (54,1%) of the total youth exposure to advertising for sweet beverages results from overexposing ads.

On **the brand level**, 4 brands show a GRP ratio bigger than 1 in both ratios 13-17/18+ and 13-17/18-34, specifically 3 beer brands (Corona Extra, Heineken Draughtken and Tuborg Light) and 1 spirit brand (Artik Vodka). Moreover, 5 other brands show a GPR ratio of 1 or more in the ratio 13-17/18-34, 3 beer brands (Becks Next, Dreher and Moretti Baffo D'Oro and 2 spirit brands (Fernet Branca Amaro and Molinari Sambuca). The highest GPR ratio of 1,40 is resulted for Artic Vodka, which indicates that youth were seeing 40% more advertising for Artic Vodka than adults on a per capita basis. When looking more closely at the percentage of ads which is overexposing youth compared to adults, it turns out that more than half of the brands (16/23) generate more than half of their total youth exposure from the overexposing ads.

3.3 Thresholds in exposure to alcohol advertising

As already mentioned, in the Italian Self-Regulation Code no reference is made to any threshold designed to protect minors from alcohol advertising exposure. Nevertheless, we investigated the results of an hypothetical 30% threshold in regards to the alcohol advertisements in May and October 2010.

Note: The total number of 4-17 year olds on the total 4+ TV population in the Italy comes down to 13,5% (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 0-5 years old), the percentage threshold of 30% would be too permissive and should at least be adjusted to 16%.

In most European countries alcohol advertisers maintain a threshold of 30% (EFRD, 2009). 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.

3.3.1 Testing the hypothetical 30% threshold

The hypothetical 30% threshold implies that alcohol commercials broadcasted 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 broadcasted along this program).

Table 8. Advertisements of which more than 30% of the viewers was 4-17 years old in May and October 2010

Brand	Channel	Program	Date	% viewers aged 4-17
Aperol Aperitivo	Italia 1	Afternoon youth program	25/05/10	30,2%
Heineken Draugghtkeg Birra	Italia 1	Afternoon youth program	25/05/10	30,3%
Artic Vodka	Italia 1	Afternoon youth program	31/05/10	30,3%
Beck's Next Birra	Italia 1	Afternoon youth program	27/05/10	30,3%
Beck's Next Birra	Italia 1	Afternoon youth program	25/05/10	30,5%
Beck's Next Birra	Italia 1	Afternoon youth program	20/05/10	31,3%
Heineken Draugghtkeg Birra	Italia 1	Afternoon youth program	28/05/10	31,6%
Moretti Baffo d'Oro Birra	Italia 1	Morning contest program	30/05/10	33,3%
Heineken Draugghtkeg Birra	Italia 1	Afternoon youth program	26/05/10	35,0%
Beck's Next Birra	Italia 1	Afternoon youth program	26/05/10	35,1%

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. Therefore, the total number of ads in these months is in fact higher than depicted.

The ten ads with a percentage higher than 30% are all broadcasted by the same channel, Italia 1, which shows mainly programs targeting children and adolescents. In fact, the ads identified were shown during “The Adventure of Merlin”, except in one case: “Super Partes” is actually an adult program, but the spot time is only five minutes before the broadcasting of a Japanese cartoon. They are spread through the whole week except Saturday**.**

3.3.2 Percentages versus absolute numbers

By comparing the percentages of viewers between 4 and 17 with the absolute numbers, one can see that the 30% threshold does not seem to protect large numbers of minors against alcohol advertisements. In Table 9, some examples of this particular ‘problem’ are presented.

Table 9:

Brand	Program	% of viewers aged 4-17	N aged 4-17	GRP* 4-17
Forst Beer	Example 1 – Prime time movie	27,8%	662.655	8,4
Moretti Baffo d'Oro Beer	Example 2 – Morning show contest	33,3%	33.902	0,4
Montenegro Amaro	Example 3 – Late nights sports	6,4%	16.144	0,2
Martini Rosato	Example 4 – Prime time sports	6,4%	472.330	6,0

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

The table gives insight into two different issues regarding the 30% threshold:

- ***Similar high percentage (± 30%) and large difference in absolute numbers.*** From the first two rows (Table 9), it becomes clear that a percentage does not easily say something useful about the amount of underage viewers that is being reached. In fact, with similar percentages (28,8% and 33,3%), the absolute numbers of young people aged 4-17 varies from 33.902 to 662.655.
- ***Low percentages (< 25%) and large difference in absolute numbers.*** Similarly, the last two rows (Table 9) make clear that even with very low percentages one can have large differences in absolute numbers.

In other words, low percentages *not* violating the threshold (if existing) 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.

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. Italian) 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). The Italian data showed that 4-17 year olds receive 9,1% of all alcohol advertising. Therefore, it is very plausible to apply the same way of reasoning for the Italian 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 12-17 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).

In Italy the 'at risk' group aged 13-17 year old comprises approximately 4,9% of the total population according to Italian census data (ISTAT Database, 2010) which is very close to the percentage of the entire TV population (AGB Nielsen 2010). 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 Italian situation would be to establish a 'proportional' standard of 5%.***

New, proportional standard for Italy

- 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).
- Italy: proportional standard of 5% based on proportion of 13-17 year olds on the total Italian population.

Possible effect of a proportional standard of 5%

In case a proportional standard of 5% would have been implemented in Italy, the total number of GRPs for 13-17 year olds could have roughly decreased from 3330,1 to 296,1, 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.

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 adults GRPs lost will be completely compensated by the advertisers by additional broadcasting.

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.

After running the analysis of introducing a 5% proportional standard, nullified for the loss of adult GRPs, the following results emerge (see Table 10). The policy would lead to a drop in adult GRPs from 5.205 to 3.732

which implicates a loss of 1.473 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

That is: it is estimated that the number of additional youth GRPs comes down to 1473 times 0,50 = 730. This results in a net change in youth GRPs of -1.629 GRPs(on the total of 4.209). This represents a decrease of 38,7% in youth exposure to television alcohol ads. Due to 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).

Table 10 . The possible effect of a 5% proportional standard (including a compensation for lost adult GRPs).

	13-17 GRPs	18+ GRPs	GRP ratio 13-17/18+
Total current GRPs	4.209	5.205	0,81
GRPs left after 5% prop. standard	1.850	3.732	0,50
Change in GRPs	-2.359	-1.473	
Change in adult exposure needed to nullify time ban		1.473	
Effect on youth GRPs (times ratio)	730		
GRPs left	2.580	5.205	
Net change in GRPs	**-1.629**	**0**	
Percentual change in GRPs	**-38,7%**	**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: AGB Nilesen, 2010.

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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. 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. In other words, low percentages *not* violating the threshold can be much more harmful than (very) high percentages in terms of absolute numbers of youngsters who are reached. 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 4-11 year olds.

Therefore, a new proportional standard of 5% is proposed for Italy. This is based on the Italian ‘at risk’ population of 13-17 year olds which comprises 4,9% of the total TV population (ISTAT, 2010). This new standard is similar to 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. Introducing a 5%

proportional standard could lead to a reduction in youth exposure of approximately 38%, even if the number of adult GRPs lost by the policy is completely compensated for.

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

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 yet.
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 2 for an overview of television time bans in all EU-27 Member States.

3.4.1 Shifts in GRPs after introducing a time ban

With the present data we can also try to estimate what the shift in GRPs could be if a certain time ban came into force.
In Table 11 (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).

The results show that after nullifying the effect of the time bans until 24h and 1h, still a decrease in number of youth GRPs is found. However, this decrease in youth GRPs is not as large when compared with a proportional standard of 5% (see Table 10). Introducing a proportional standard would result in a decrease of 39% of youth GRPs. In Table 11 one can see that the net decrease in GRPs after implementation of a time ban ranges from 4,6% (-195 GRPs; at 24h) to 4,1% (-174 GRPs; at 1h), again, provided that the advertisers succeed in shifting their patterns in such a way that they can make up for the lost adult GRPs.

If the Italian time ban would shift to e.g. 23.00h,it would decrease youth exposure to alcohol commercials on television just by nearly 5% when adjustedfor ossible shifts to make u the lost adult GRPs.
It might well be possible that in absolute numbers less minors are reached after 23.00h, but a relatively small group of youngsters that watches late night television will be reached excessively. Research has shown that having a tv in the bedroom predicts the initiation of (harmful) drinking (Hanewinkel & Sargent, 2009). Therefore, one might infer that this small group of youngsters watching late night TV without much parental control is a higher risk group that should be protected rather than bombarded with alcohol ads late at night.

3.4.32 Summary time bans

To summarize, in Europe, rather than in the U.S., legal time restrictions on alcohol advertising are currently often in place. 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 will happen exactly 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 the Italian time ban to at least e.g. 23.00h would lead to a relatively small large 'gain' of reduction in youth GRPs within the watershed (-11% in 12-17 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 24h would lead to a reduction of 22% in exposure of 12-17 year olds. If no shift in advertising occurs, the average number of ads seen by the at risk minors aged 12-17 would decrease with roughly 23 (the total number would drop from 32 to 8). 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. It is questionable whether it would be possible for the advertisers to make up a loss of 2.331 GRPs (between 21.00-23.00) after 23.00h.

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 11 (final columns) the effects of a proportional standard of 5% in combination with different time bans is shown (see Appendix 4 for specific calculations). Again, also in this analysis the assumption was that advertisers can and will al least nullify the effect of the policy (compensate the number of adult GRPs lost).

Not unexpectedly, the results reveal that combining the 5% proportional standard with a time ban is more protective than applying both measures separately. Extending the watershed from 21.00 to 23.00 in combination with a 5% standard would reduce youth exposure with 31,4%, while the per capita exposure remains the same (see Table 11)

Table 11. Change in 13-17 GRPs after 3 different policies (proportional standard of 5%, time bans, and combination of standard and bans)

	Current GRPs		Proportional standard 5%		Different time bans			Prop. standard + time bans	
Hour	***13-17***	***18+***	***Change 13-17 GRPs***	***%***	**Time ban until**	***Change 13-17 GRPs***	***%***	***Change 13-17 GRPs***	***%***
< 21	1.746	2.647			**21h**	805	19,1%	-1.099	-26,1%
21-22	540	508			**22h**	677	16,1%	-1.190	-28,3%

22-23	678	611			**23h**	299	7,1%	-1.322	-31,4%
23-24	707	740			**24h**	-195	-4,6%	-1.556	-37,0%
24-01	331	431			**01h**	-174	-4,1%	-1.887	-44,8%
01-02	163	197							
> 02	44	70							
Total	4.209	5.205	-1.629	-38,7%					

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 3 and 4 for the specifications of the effects of the final two policies (different time bans and the combination between a 5% proportional standard and different time bans). Source: AGB Nielsen, 2010.

The reductions in exposure of 13-17 year olds (13-17GRPs) as a result of the three different policies have been graphically represented in Figure 5.

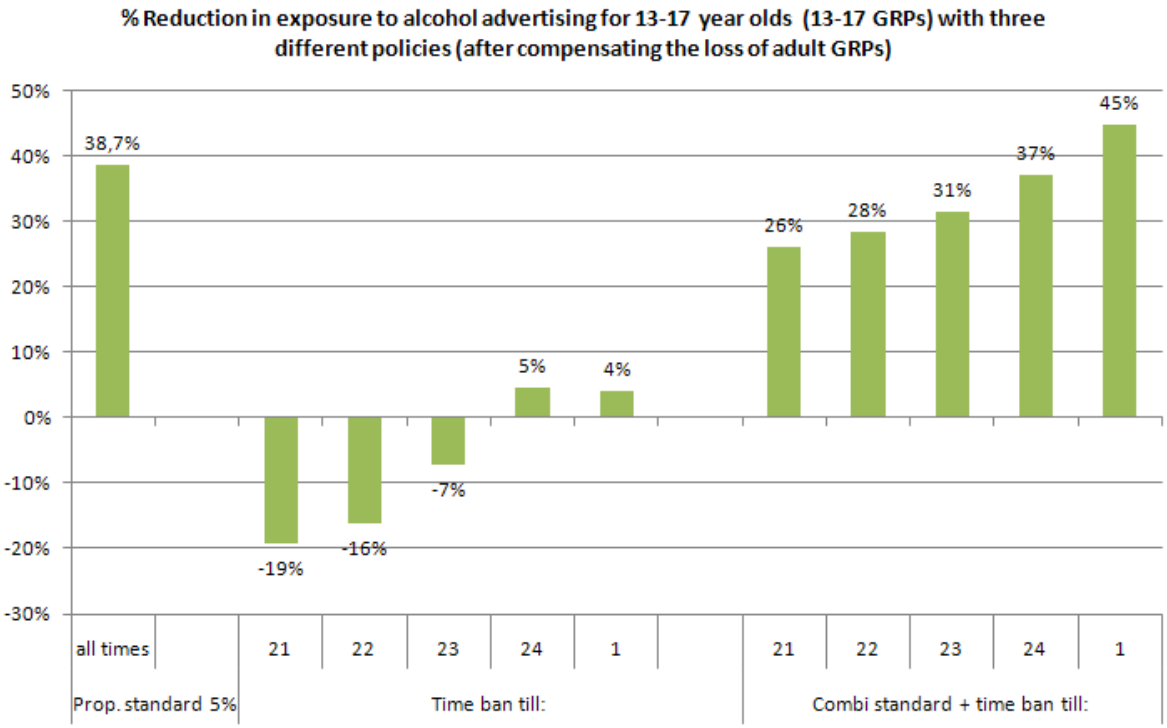

Figure 5. The percentage of reduction in exposure to alcohol advertising (13-17 GRPs) at three different policies: a) implementation of a 5% proportional standard, b) implementation of different time bans, and c) implementation of a combination of a 5% proportional standard and a time ban. In all outcomes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

3.5.1. Summary combination policy

To summarize, combining a 5% proportional standard with a time ban generates the largest effects in preventing youth exposure. The combination of a 5% standard with a ban until 23.00 can cut youth exposure by a third (from 4.209 youth GRPs to 2887 GRPs; -31,4%), while the number of generated adults GRPs remains the same as before the introduction of the combined policy.

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),. Earlier in the report it has been argued that in order to protect young people in the age of 13-17 against exposure to alcohol commercials on television, a much lower proportional standard of 5% 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 Italian youngsters (RAI 1, Canale 5 and Italia 1) a total of 1.891 alcohol advertisements was broadcast in May and October 2010, in the 24 hours.
- The majority (75%) of Italian alcohol commercials are for beer in May, whereas vermouth cider alcopops and other alcoholic beverages under 15% are the majority in October (48%).
- A total of 12 different producers of alcoholic beverages were active both in May and October, even though they are not the same in the two different months. Altogether 16 producers advertised for 23 different brands. Most commercials were broadcasted by Heineken (N = 440; 33.8% of the total number of ads registered, 437 concentrated in May).

With respect to (over)exposure:

- Of all alcohol advertising reaching minors, 54% was seen by the youngest age group (4-12) and 46% 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 261 million.
- Children aged 4-12 saw on average 28-31 alcohol commercials in the selected period, while the older minors (13-17) saw on average 42-46 alcohol commercials, assuming a 90-100% reach of the advertising.. This is very close to the number of 43-45 ads seen by the young adults aged 18-34. The 35+ group saw on average the most ads: 54-60..
- The GRP ratios of 0,81 resp. 0,97 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). Still, in almost one third of the 1.573 alcohol commercials youth aged 13-17 turned out to be relatively overexposed compared with adults (35,0% overexposure compared with adults (18+) and 37,5% overexposure compared with young adults (18-34)).
- There are indications that specific types of beverages generally reached more minors than adults: the GRP ratios for beer is above 1 in the overexposure 13-17 / 18-34.
- On the brand level, 4 brands show a GRP ratio bigger than 1 in both ratios 13-17/18+ and 13-17/18-34, specifically 3 beer brands (Corona Extra, Heineken Draughtken and Tuborg Light) and 1 spirit brand (Artik Vodka). Moreover, 5 other brands show a GPR ratio of 1 or more in the ratio 13-17/18-34, 3 beer brands (Becks Next, Dreher and Moretti Baffo D'Oro and 2 spirit brands (Fernet Branca Amaro and Molinari Sambuca).

With respect to the 30% threshold:

- 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% or 25% 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 Italy has been calculated. According to the census data the 'at risk' population of 13-17 year olds comprises 4,9% of the total Italian population (ISTAT, 2010). A standard of 5% 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 by 39% 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 implementinga time ban to e.g. 24.00h would lead to a

relatively small decrease in youth GRPs within the watershed (5% in 13-17 GRPs), assuming the advertisers will make up for the loss in adult GRPs.

6. 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 Italy a proportional standard of 5% rather than 30% makes more sense. Introducing an 5% proportional standard could theoretically lead to a reduction in youth exposure of approximately 39%, 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 5% (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 5% 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 5% standard with a ban until 1h decrease youth exposure by 45%, 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 television[2] 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 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:

[2] 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.

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.

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Appendix

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

Number of alcohol ads per hour of the day in May and October 2010.

		May		October	
From	**To**	**N**	**Percentage**	**N**	**Percentage**
6:00	6:59	15	1,14%	1	0,17%
7:00	7:59	21	1,60%	5	0,86%
8:00	8:59	13	0,99%	4	0,69%
9:00	9:59	50	3,81%	3	0,52%
10:00	10:59	31	2,36%	1	0,17%
11:00	11:59	56	4,27%	3	0,52%
12:00	12:59	58	4,42%	19	3,28%
13:00	13:59	119	9,07%	36	6,22%
14:00	14:59	60	4,57%	10	1,73%
15:00	15:59	78	5,95%	2	0,35%
16:00	16:59	0	0%	0	0%
17:00	17:59	0	0%	0	0%
18:00	18:59	15	1,14%	3	0,52%
19:00	19:59	81	6,17%	34	5,87%
20:00	20:59	73	5,56%	30	5,18%
21:00	21:59	71	5,41%	28	4,84%
22:00	22:59	87	6,63%	38	6,56%
23:00	23:59	160	12,20%	70	12,09%
0:00	0:59	155	11,81%	91	15,72%
1:00	1:59	122	9,30%	110	19,00%
2:00	2:59	47	3,58%	54	9,33%
3:00	3:59	0	0%	6	1,04%
4:00	4:59	0	0%	20	3,45%
		0	0%	11	1,90%
Total ads per month		1312	100%	579	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 RAI 1, Canale 5, Italia 1). Therefore, the total number of ads in these months is in fact higher than depicted here.

Source: AGB Nielsen, 2010.

Appendix 2: 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 alcoholic beverages before 21.00 No alcohol advertising for spirits.	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 1st 2009. After a transitional period of 1 year, on January 1st 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 3: GRP shifts after implementing different time bans

Table 11. 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	1.746	2.647	**21**	1.746	2.647	0,96	2.550	5.014	5.205	805	19,1%
21-22	540	508	**22**	2.286	3.156	0,94	2.962	4.886	5.205	677	16,1%
22-23	678	611	**23**	2.963	3.766	0,87	3.262	4.508	5.205	299	7,1%
23-24	707	740	**24**	3.671	4.507	0,77	3.476	4.014	5.205	-195	-4,6%
24-01	331	431	**01**	4.002	4.938	0,78	3.828	4.035	5.205	-174	-4,1%
01-02	163	197									
> 02	44	70									
Total GRPs	**4.209**	**5.205**									

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. As can be seen in the final column, the estimation is that implementation of a time ban will result in an *increase resp. decrease* of the net number of youth GRPs. Source: AGB Nielsen, 2010.

Appendix 4: GRP shifts after implementing a proportional standard + time ban

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

	Current GRPs[1]		Proportional GRPs only[2]		GRPs lost due to proportional standard[3]	
Hour	***13-17***	***18+***	***13-17***	***18+***	***13-17***	***18+***
< 21	1.746	2.647	936	2.203	809	445
21-22	540	508	198	296	342	212
22-23	678	611	215	331	463	280
23-24	707	740	259	429	448	311
24-25	331	431	166	305	165	126
25-26	163	197	58	117	105	80
> 02	44	70	17	51	27	20
Total GRPs	**4.209**	**5.205**	**1.850**	**3.732**	**2.359**	**1.473**

[1] The total number of GRPs generated per hour. [2] GRPs left after introduction of a proportional standard of 5%. [3] The number of GRPs which are lost due to introduction of a 5% 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.

Table 5b. Effect of a proportional standard of 5% 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	3.675	0,60	2.196	3.110	5.205	-1.099	-26,1%
22.00	3.972	0,58	2.304	3.019	5.205	-1.190	-28,3%
23.00	4.303	0,55	2.387	2.887	5.205	-1.322	-31,4%
24.00	4.732	0,51	2.412	2.653	5.205	-1.556	-37,0%
01.00	5.037	0,45	2.247	2.322	5.205	-1.887	-44,8%

[4] Part b of the table shows possible effects when a proportional standard of 5% 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 5% 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 5% 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 5.205, 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.