



FEDERAL RESEARCH PROGRAM ON DRUGS

Policy recommendations

ALCOLAW

The Law of 2009 concerning the selling and serving of alcohol to youths: from state of the art to assessment

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Policy recommendations project ALCOLAW

Introduction

Alcohol consumption is a widely discussed topic in the field of health issues in the world. Delaying the onset of drinking should be a key issue in alcohol prevention (WHO, 2004), since youngsters are more vulnerable than adults (Anderson & Baumberg, 2006). Although age limits on the use of alcohol exist throughout Europe, alcohol use by youngsters of 15 and 16 years of age is common (Mulder & De Greeff, 2013). Also in Belgium, where the minimum age limit for the use of alcohol is 16, almost half of the group of less than 16 year old already drank alcohol in their life (Rosiers, 2017). Indeed, a European study related to alcohol use among adolescents showed (Steketee, Jonkman, Berten, & Vettenburg, 2013), from a sample size of 33.566 students from 25 countries (from 11 to 18 years old, mean age= 13,90), that overall lifetime prevalence rate for beer, wine and breezers was 60,1% and 34,2% for spirits.

Many factors may contribute to these high figures of underage alcohol consumption, but easy access to alcohol is generally assumed to play a significant role (Gosselt, van Hoof, de Jong, & Prinsen, 2007). Availability can be effectively reduced by national policies that restrict supply and availability. One of the possible measures taken by a government to reduce availability is establishing a minimum legal drinking age which has been a proven effective national health policy measure (Babor et al., 2010). Therefore, the legislation in Belgium was adapted in 2009 (Capouet, 2009; FOD Volksgezondheid, 2009). However, a law aiming to restrict the availability of alcohol relies on retailers' willingness to refuse to sell alcohol to underage customers. Some possible reasons of non-compliance have been suggested but have not been clearly examined (e.g. lack of knowledge of the law as well as motivational, psychological, economic, educational reasons) (Kuendig et al., 2008). Finally, legal age restrictions without enforcement at different levels (federal, regional and local) are insufficient (Gosselt et al., 2007) and so these different levels should pay attention to enforcement. The effect of enforcement is considered to be twofold: it influences the direct availability of alcohol and it influences the societal norms, attitudes and beliefs in society (Wagenaar, 2011).

In this document we will focus on policy recommendations following the evaluation study for Federal Science Policy of the alcohol law from 2009 including the different perspectives of availability, enforcement and the knowledge of the law. More information can be found in the full end report and/or the summary report of the project ALCOLAW (Van Havere et al., 2017).

Minimum legal drinking age

Effect of the law on the minimum legal drinking age

The literature provides evidence of the beneficial impact of minimum legal drinking age legislation on public health. A plethora of studies indicated that a higher minimum age leads to reduced alcohol-related traffic accidents, mortality and morbidity rates among young people. However, the studies on the consumption of alcohol within the group of young people show mixed results: a substantial group finds no significant effects, some only a minimal effect. Overall, the majority of the results of previous studies show that a higher minimum legal drinking age is associated with a lower rate of alcohol consumption (Van Havere et al., 2017).

In this ALCOLAW study we analysed the evolution in alcohol consumption on the Flemish and Belgian level between 2002 and 2014, since the law was changed in 2009. For all outcome measures, we found statistically significant decreases, indicating that overall alcohol consumption among Flemish and

Belgian adolescents (10 to 18 years) has decreased in the 2002-2014 period. Moreover, it was shown that, consistent with the existing literature, age and gender are highly significant predictors of the different outcomes with higher consumption being linked to higher age and being male. Furthermore, the analyses at the Flemish and Belgian level showed significant statistical interactions between age and time. This indicates that over the research period, alcohol consumption patterns in the different age groups (under 16 versus older for fermented drinks (e.g. beer), under 18 versus older for distilled drinks (liquors)) have evolved differently. More specifically, the change of consuming alcohol decreased at a higher pace for those under the respective age limit. So, in general alcohol consumption decreased over time, but the decrease was stronger in children under 16 (for fermented drinks) and under 18 (for distilled drinks). This could indicate towards an effect of the law on minimum legal drinking age, although it could also be due to other events (e.g. 2008 financial crisis) or due to differentiating trends that occur without policy intervention. To control this time trend in alcohol consumption and the possible association with the law on minimum legal drinking age, we also analysed other countries from an international sample. At the international level, similar relations were found between alcohol consumption, age and gender in the group of 11-15 years old. Moreover, the significant time trend, which was observed in Belgium, was also found in the international sample, indicating that overall, alcohol consumption has decreased in the 2002-2014 period. **Therefore, we conclude that no specific evidence was found that supports an impact of the Belgian drinking age legislation on adolescent alcohol consumption. On the other hand, it remains uncertain what the Belgian trend would have looked like in the absence of the 2009 minimum legal drinking age legislation.** Furthermore, we supplemented the Belgian minimum legal drinking age legislation analysis with an additional international policy analysis on “what works” to reduce alcohol consumption in adolescents younger than 16 years old. With regards to the minimum legal drinking age, this was found to be non-significant in relation to life-time and weekly alcohol consumption and positively related to life-time drunkenness indicating that countries with higher minimum legal drinking ages typically have a higher proportion of life-time drunkenness. Note that reversed causality could play a role here meaning that countries which have a higher proportion of life-time drunkenness institute higher minimum legal drinking ages.

Notwithstanding the lack of specific evidence supporting an impact of the (Belgian) drinking age legislation on adolescent alcohol consumption, three NGT's (Nominal Group Techniques) out of eight (the Flemish school actors, prevention workers and general practitioners) in the ALCOLAW study state that no distinction should be made between different types of alcohol, as alcohol is harmful in general. These groups support the idea of raising the legal age limits to 18 for all types of alcohol. Different NGT groups moreover draw a parallel with smoking. The prohibition of smoking in public areas caused a mentality shift in society, which is considered to be an inspiring case for alcohol when it comes to behavioural modification. Moreover, one age limit would make it clear to everyone and might increase compliance. For now, the distinction between 16 and 18 years old might give the impression that it is safe from 18 years onwards to drink alcohol and could give liquors an image of adult drinking (and thus “forbidden fruit” for youngsters). One extra argument given by some members of the steering group from the ALCOLAW project is the fact that Belgium is one of the few countries of the EU Member States with 16 as the legal age for fermented drinks (Mulder & De Greeff, 2013). Arguments against raising the age limit to 18 are also given though. First, increasing the minimum legal drinking age to 18 years may not be easily implemented since it is not in line with the social reality of the Belgian drinking culture in which a lot of young people already start drinking alcohol from around 15 years old. The law

is now already more stringent than societal attitudes, according to different groups. Second, introducing alcohol gradually in young people's life can be seen as a beneficial issue from a pedagogical perspective. In this way, young people aren't fully and suddenly exposed to alcohol when they turn 18.

Recommendation 1: Since no unique effect of the minimum legal drinking age of 2009 was found in the analysis in the ALCOLAW project, nor a consensus was found within the different groups of stakeholders, in combination with the conflicting results on alcohol consumption which can be observed in other studies, we recommend to not prioritise the increase of the minimum legal drinking age. At this moment, the scientific evidence doesn't support a future change in the law unequivocally, although this means Belgium will maintain its position to be one of the few EU countries with this low age limit.

Furthermore, the analyses in our ALCOLAW project aimed to explore whether the changed minimum age had an impact on trends in the health of the Belgian, adolescent population, more specifically if there was an effect on neuropsychiatric and acute conditions. In general, the results of the statistical analysis did not provide evidence that the legislative change of the minimum legal drinking age in Belgium, after 2009, has had an impact on health-related outcomes (i.e. neuropsychiatric and acute conditions). The decreasing trend that was found in adolescent alcohol consumption, was not found in health-related outcomes. Instead, diverging time trends were found depending on the health-related outcome. The absence of time trends in problematic drinkers could be expected since problem drinkers is another target group than the young people the 2009 minimum legal drinking age is targeting on. Future analyses could give more insight on possible long term consequences of the decrease in alcohol consumption in the general group of young people.

Recommendation 2: In future years secondary analysis should be conducted on the data of the Minimal Hospital Data and the Minimal Psychiatric Data to analyse the impact on health-related outcomes of the 2009 law on the general group of young people.

Focus (not only) on the young people

From the VAD school report it is read that more than half of the Flemish students younger than 16 and don't drink give the answer 'I don't drink alcohol because it is forbidden by the law' (Melis, 2016). We can assume from this result that the law does influence their decision. However, the ALCOLAW project shows a more complex picture.

From the surveys with young people it is clear that they seem to know the law rather well. However, this (passive) knowledge of the law doesn't seem to be sufficient to comply with the law in different situations. From the analysis of the data the internal values of the young people seem to be more important than the prohibition by law. When the law confirms their norms, they are inclined to follow the law. But when the law doesn't support their own use, (n)or their individual norms, they are more permissive to alcohol use by young people even though it is forbidden by law. This pattern of result is especially found in problematic drinkers profiles and in older adolescents. So from our results it seems that prohibition is an insufficient condition to translate or integrate the legal norm into young people's internal system of informal norms. A higher awareness and consciousness about the harmful aspects of alcohol consumption can be obtained by informing youngsters about health-related themes, for example through a media campaign (De Ruyver, 2009). A single component information campaign does not suffice, but initiatives with multi-component approaches in seemed to have more positive

effects, especially when law enforcement is included (Akbar et al., 2011; Bolier, Voorham, Monshouwer, van Hasselt, & Bellis, 2011; Calafat, Juan, & Duch, 2009).

Recommendation 3: Prohibition does not suffice for young people, therefore, we recommend to focus on educating and supporting young people in making healthy choices, and informing them on all aspects on the use of alcohol. This can include information campaigns and interventions aimed at the general population, but also towards parents, youngsters, students, etc. Information (campaigns) is just one component and should be imbedded in a more global integrated approach (see for more information the part on integrated prevention, recommendation 19).

According to the different groups of stakeholders in the ALCOLAW project (sellers, school actors, street corner workers, specialised prevention and early intervention professionals, low threshold services specialised in youth, general practitioners) a legal framework will not be sufficient to change moral standards towards drinking alcohol in Belgium. Moreover, discussing the minimum legal drinking age puts the focus on young people while the highest levels of consumption and problems are seen in older groups. According to the health professionals, alcohol is not a juvenile but a societal problem.

Recommendation 4: The focus of alcohol interventions should not be solely on the young people. Since drinking is part of the Belgian culture, sensitising interventions can question the role of alcohol in our culture, like the alcohol abstinence challenge Tournée Minerale (BE) or Dry January (UK).

Improving sellers' compliance with the law

As we concluded from the surveys with the youngsters, the knowledge of the law is not sufficient to result in complying with the law. Being willing and motivated to comply is crucial, so individual norms are essential. From the interviews with sellers (in this group an overrepresentation of catering industry personnel was included in the target population) in the ALCOLAW project we learn that most sellers are willing to comply, but that they do not always know how to comply in practice. They feel the minimum legal drinking age law is hard to comply with. Even when good practices such as internal rules, communication on legislation, introducing bracelets per age group are in place, it remains difficult to comply, especially for young sellers. Young people are very inventive when exposed to limitations which they don't support: shoulder tapping, preloading, etc.

Responsible Beverage Training would increase the ability of sellers to comply with the law. Different international interventions can be inspirational in this matter. Most notably is the Stockholm STAD-project, in which responsible beverage training and alcohol education to the public is combined with enhanced enforcement. Research results indicate that the project has resulted not only in increased compliance with the minimum legal drinking age legislation, but also in a 29% decrease in crime (Wallin & Andreasson, 2004; Wallin, Norstrom, & Andreasson, 2003). This project is an example of a multicomponent strategy based on three pillars: 1) a training program for all restaurant staff members in responsible beverage service, 2) strict enforcement of alcohol legislation by police, and 3) a community mobilization through media advocacy. This is all accomplished by setting up cooperation between different stakeholders (Wallin, Gripenberg, & Andreasson, 2002). Calafat and his colleagues concluded in their review that the best strategy is the combination of training bar personnel, cooperation with public services and leisure industry and law enforcement (Calafat et al., 2009). The Dutch Trimbos institute developed guidelines for a municipal approach to discourage drunkenness and serving drunk people (2017). This intervention is composed of four pillars: 1) involve catering industry

(and other stakeholders), 2) train bar personnel, 3) communicate to the general population, and 4) support the catering industry and enforce where necessary.

Recommendation 5: Local governments should be motivated to implement a multicomponent strategy in their cities. The combination of responsible beverage trainings, with law enforcement, media advocacy and other prevention initiatives (e.g. introducing age bracelets) raises the effectiveness of the intervention. For this, collaboration can be searched for with the local prevention service who can develop an integrated prevention approach tailor made for the local context and together with the different stakeholders.

Introducing age limits on alcohol labels

When focusing on the minimum legal drinking age legislation some criticism arises in our ALCOLAW studies. Most sellers (individual interviews) don't know the law very well, and if they do know the law, they don't master or don't understand the rationale behind the law. This is not only true for the sellers, but also for the different groups of stakeholders. Also specialists (NGT) have difficulties linking different alcoholic beverages to the appropriate minimum legal age. Both sellers and health professionals criticise the distinction based on the fabrication process (i.e. fermented or distilled) and recommend to formulate a distinction based on the degree of alcohol in the product (alcohol percentage). Overall, the general elements of the law are fairly well known, but there are discussable drinks, like Martini or new drinks (e.g. Cubanisto) that are difficult to assign to the appropriate minimum legal drinking age.

While there is no consensus on keeping the distinction between beers (fermented drinks) and liquors (distilled drinks) in the law within the different groups of stakeholders, some conditions should be met when choosing for gradually introducing alcohol. Whatever distinction is chosen by the policy makers (fabrication or percentages), this distinction should be made more clearly. Our recommendation is to introduce a colour scheme or a label which defines the legal age the purchaser should have before the seller can sell this drink. In this case there would be no need to educate sellers in knowing the different categories in alcohol drinks and their related legal age. It also provides visibility to the law. When introducing this age sign, also more general health warnings on the bottles can help to establish a social understanding that alcohol is a special and hazardous commodity (Wilkinson & Room, 2009). For now alcohol labels are an underused and under-tried way to empower consumers to make healthy decisions about alcohol consumption in Europe. Public health organisations and consumers strongly support enhanced labelling of alcoholic beverages, but it is imperative that consumer information (e.g. calories) is coupled with health education and other policy tools to reduce harmful drinking behaviours (Martin-Moreno et al., 2013). More research is needed given the potential benefits and relatively low cost of such measures, to understand how labelling information is interpreted. It is recommended to introduce more studies on this matter.

Recommendation 6: We recommend to implement alcohol labels for alcoholic beverages which include the minimum legal age to purchase the beverage next to some global health warnings and consumer information. This minimum age can support the seller to comply and all information is given to the consumer so he/she can make a well-informed choice.

Recommendation 7: A study is recommended to calculate the potential benefits and relatively low cost of alcohol labelling in Belgium.

Checking ID's

Whether or not the legislation remains unchanged or is changed to one age limit or not, barriers continue to make it difficult to comply with the alcohol law. Almost all respondents in the ALCOLAW project emphasize that when showing the identity card would become a habit in Belgium, this would make the application of the law much easier. Other countries like the Netherlands have good experience in obliging sellers to ask for the age when buying alcohol (Van Hoof, 2017; van Hoof & van Velthoven, 2015). In Belgium there is no legal requirement to determine age. Still, making it mandatory to ask for age could be beneficial for the controls too as under the current legislation the actual purchase of an alcoholic drink is an essential condition before prosecution is possible. When introducing legislation obliging sellers to ask for the age, this could give opportunities for enforcement, but it would also provide the seller the support to comply. A good practice from other countries is to introduce a reference age, e.g. 25 year (Mulder & De Greeff, 2013). This means that every purchaser who looks younger than 25 should be asked for their age. For example, in Germany, sellers are obliged to ask everyone who looks younger than 25 for an ID (Mulder & De Greeff, 2013). In Scotland sellers are required to follow a procedure, called "Challenge 25", obliging them to ask for age verification for anyone who looks younger than 25 years old. Even more, by implementing this reference age, the ethical and juridical concern of provoking a crime can be avoided (Forsyth, Davidson, & Ellaway, 2013).

Recommendation 8: The recommendation is to introduce a legislation which makes it legally required to ask for the age of a customer before selling alcohol. We recommend a reference age of 25 years. Introducing this new legislation will need communication, guidelines on how to ask for this age and control actions.

More enforcement

The full benefits of legal drinking-age limits are only realized if these limits are effectively enforced. Despite laws on the minimum drinking age, young people continue to be able to buy alcoholic beverages (Anderson, Møller, & Galea, 2012). In this ALCOLAW project, different groups of stakeholders advocate for more enforcement. The current law is not being (fully) implemented by the sellers and according to the different groups of stakeholders the main reason for this is the lack of enforcement or control. Communicating (e.g. press releases) on this enforcement interventions could increase the motivation of the different sellers to comply with the law. As Bolier et al. (2011) concluded in their review on prevention in nightlife, multi-component approaches have more positive effects, especially when law enforcement is included. However, these effects could decay within a few months. Findings from research suggest that the common practice of one enforcement check per year is not sufficient to create substantial decreases in alcohol sales to youth (Wagenaar, Toomey, & Erickson, 2005). From a review on media (Van Havere, 2012) and a Cochrane review conducted by Goss et al. (2008) it is concluded that behavioural change can be noticed when media attention is put in place and covers enforcement actions in combination with other community activities. The media coverage guaranteed that increased law enforcement was known commonly through local publicity (Warpenius, Holmila, & Mustonen, 2010).

Recommendation 9: More enforcement actions to check the compliance with the minimum legal age by the sellers (horeca, supermarkets, night shops, public parties) should be undertaken. The frequency should be balanced so the sellers have the impression that they are checked two or three times a year. Ideas on the operationalisation can be found in other countries. E.g. the first control can be followed by a warning, while the second one is only conducted within the group of non-compliers, etc.

Communication (broadcast, targeted communication, locally, nationally, social media) can increase the compliance of the sellers.

Furthermore, to maintain compliance, attaching negative consequences to law violations is important too and it should be made clear who could receive the possible fines. Some discussion was observed in the interviews on this topic. A minority of respondents argue that the fines should also be targeting the underage buyers. More respondents think it is more efficient and ethical to address the sellers.

Recommendation 10: The law should clearly define the fines following law violations. More clarity should be given in this legislation on who can be fined in the case of underage selling.

Mystery shopping

From literature we know that mystery shopping is the most effective enforcement strategy (via test purchasing), but it is also very effective when included in a multi component prevention strategy (Mulder & De Greeff, 2013). In the ALCOLAW project, it is clear from the interviews with the different stakeholders that sellers should be made aware that there is a distinction between mystery shopping for prevention and for enforcement purposes and that these are mandated by different authorities.

According to the respondents in our ALCOLAW project, the method of mystery shopping, largely unknown except for shops, could help to raise awareness and, if results are made public, could rectify (or confirm) the impression that some types of sellers continuously break the law. The local policy could include to target premises for mystery shopping which are defined as high risk premises. Targeting high risk premises would need a clarification on the indicators that are being used and should be defined at the local level.

When introducing mystery shopping as an enforcement strategy, it seems (from the feasibility study in the ALCOLAW project) necessary to create a legal basis for mystery shopping, including criminal proceedings following a transgression of the law. For example, in the current law, it is not clear who can be penalised or whether a test purchaser can be a witness in a court trial. The case of the National Lottery can be an inspiring good practice to explore, since it shows some similarities with the 2009 alcohol law.

Recommendation 11: Mystery shopping can be conducted at the local level for prevention aims and can be used at the federal level as a control strategy in enforcement actions. The federal government should use this method to increase the controls and the local government to analyse their local compliance rates. These interventions should be coordinated and well planned with the local authorities (mandated through the local prevention worker/horeca coordinator). For both intentions the detailed protocol of VAD can be used (see <http://www.vad.be/artikels/detail/aan-de-slag-met-de-lokale-monitor-alcohol--jongeren>). Caution is recommended for possible undesired side-effects of introducing youngsters in these actions.

Other availability interventions

The physical availability of alcoholic beverages refers to the ease or convenience of obtaining alcohol for drinking purposes (Anderson et al., 2012). According to Babor and his colleagues (2010), among the 10 best practices (besides alcohol taxes) in preventive alcohol policies are interventions in the physical availability of alcohol such as the minimum purchase age, government alcohol monopolies, and

restrictions on the times of sale and the density of outlets selling alcoholic beverages. We already discussed minimum legal drinking age and will now focus on other availability measures.

Recommendation 12: As written in the European Journal of Public Health there is a clear need for countries in Europe to develop comprehensive alcohol policies. From a health perspective this should mainly focus on the price of alcohol, availability and marketing restrictions as outlined above (Van Hoof, 2017).

Restricting hours and days

From our international analysis in the ALCOLAW project we can conclude that restricting hours and days on which alcohol can be sold leads to lower weekly consumption. This is confirmed by the literature. Several studies have used a diverse range of measures to examine the relationship between retail availability and underage alcohol consumption, all of which have found a significant association between easily accessible alcohol and drinking behaviour (Gruenewald & Ponicki, 1995; Popova, Giesbrecht, Bekmuradov, & Patra, 2009; Todd, Gruenewald, Grube, Banerjee, & Remer, 2006; Voas, Romano, Kelley-Baker, & Tippetts, 2006; Williams & Ribisl, 2012).

In Belgium the free availability can be observed at numerous places, but specifically in gas stations and night shops. Among the NGT groups of the Flemish school actors and specialised prevention workers and the French GP's, there is a consensus on limiting the alcoholic beverages supply in these premises, since participants find it too easy for underage buyers to purchase a bottle of liquor. These arguments of NGT participants are indirectly confirmed by a literature review of Campbell et al. (2009) on the effectiveness of limiting outlet density on the reduction of excessive alcohol consumption and alcohol-related harms. This review revealed that more permissive licensing procedures bring about an increase in the number of on- and off-premises, which in turn leads to an increase in alcohol consumption and related harm.

Recommendation 13: In Belgium it seems not feasible in the current context (economic interests, different levels of authorities, no public support,...(Lievens et al., 2016)) to limit the selling of alcohol to specialised shops like in Australia or Canada, however other actions can be undertaken. On a local level limiting the availability and easy access to alcohol in certain areas (around football stadiums, schools,...) in the cities or with certain events/festivities (carnival,...) is recommendable. Also locations where unsupervised drinking is being observed (e.g. vending machines), limitations on the selling of alcohol should be put in place. Local authorities should also criticize their own licensing policy.

Quantity

Rules on the maximum size or number of drinks to be served to customers at one time is part of availability (Anderson et al., 2012). In Belgium it is not allowed to serve alcoholic drinks to drunk people. However, in light of the minimum legal drinking age debate, stakeholders argue that the law should better focus on the quantities than on the fabrication process. It is possible now for a 16 year old to buy and drink lots of beers but not one mixed drink, or to buy a whole bottle of wine. However, this restriction is hard to operationalize due to the complexity of the correct guidelines for different profiles of buyers. From a health perspective it is difficult to introduce a healthy guideline, since Stockwell and his colleagues (2016) conclude there is no safe level of consumption.

Recommendation 14: Since it is hard to operationalise the selling of limited quantities e.g. in a bar, it is recommended to include information related to drinking behaviour and decision making skills. This

could include maximum amounts, frequency of drinking, avoiding possible problematic drinking patterns etc. The VAD already wrote guidelines on the use of alcohol, see <http://www.vad.be/assets/2281>.

Pricing of alcohol

In the ALCOLAW study we looked at the variable ‘affordability’. The affordability index looks at changes in alcohol prices compared to changes in income. The idea is that even if the price of alcohol rises, consumption can still increase if the disposable income of households rises at a faster pace (Burton et al., 2016; Rabinovich et al., 2009). What we can conclude from our analyses is that when alcohol becomes relatively ‘cheaper’, young people tend to drink more. Increased affordability is linked to higher alcohol consumption.

Taxation in its different forms is the most common measure by which the public sector at different levels has affected the economic availability of alcoholic beverages (Anderson et al., 2012). Recently the Supreme Court of the UK ruled that the introduction of the Minimum Unit Pricing¹ (MUP) is lawful in Scotland (Eurocare, 2017b).

International research shows that raising the prices has a clear effect on the alcohol consumption. Different variables under the scope of research can be found, but almost all come to the same conclusions: Price affects drinking in all types of beverages and across the population of drinkers, from light drinkers to heavy drinkers (Wagenaar, Salois, & Komro, 2009b in Anderson et al., 2012). The consumption decreases (also binge drinking), specifically in the group of young adolescents and of heavy drinkers and it reduces alcohol-related harm (WHO, 2014).

Recommendation 15: From the scientific information we have now, it is recommended to not withdraw the extra taxation on alcohol from 2015. However, future price increases (taxation or minimum unit pricing) should be further examined from an economic perspective. The increased taxes of 2015 can be an opportunity to study this more into detail. Additional research taking into account the economic and thus overall societal impact is required. The overall welfare effect of pricing policy can be studied using a general equilibrium approach in which the fiscal effect is incorporated and the welfare effect of different price levels can be simulated (Buyse, Heylen, & Van de Kerckhove, 2017; Heylen & Van de Kerckhove, 2013).

Local authorities should discourage promotional actions on alcohol at parties, like forbidding all-in parties where you can drink as much as you can for the same price or discourage the use of so-called booze cards.

Marketing

In the analyses in the ALCOLAW project additional to the availability policies and the affordability index, the effect of marketing restrictions (namely whether there was a complete ban, partial statutory

¹ Minimum pricing is a ‘floor price’ beneath which alcohol cannot be sold and is set based on the amount of pure alcohol in a product measured in units or grams so the more grams of pure alcohol in a bottle/can, the higher the price. The relationship between alcohol price, consumption and harm is the foundation on which the policy of minimum pricing is built. Minimum pricing has been favoured by health advocates as an effective strategy to address the growing health crisis that has resulted from the increased affordability of alcoholic beverages in some countries where supermarkets and shops are using cut price alcohol to attract customers. Minimum pricing guarantees an effect on shelf price, it relates price to alcohol content, and it is simple to apply. Large retailers cannot simply absorb price increases as can happen with other pricing policies” (Eurocare, 2017c)

restrictions, a voluntary self-regulated code or no restrictions at all, on broadcast, print media, billboards, sport sponsorships and the internet) was measured. It is concluded that current marketing restrictions were not found to have a significant effect on alcohol outcome measures, which is in contrast with other studies (Anderson & Baumberg, 2006; Anderson et al., 2012). However, single measures may not have a significant impact on alcohol consumption and a combination of such measures may do the job. In the analyses the Total Policy Index was also found to be significant and negatively related to life-time alcohol and weekly consumption. This suggests that the combination of policy measures which Total Policy Index represents (availability index, the affordability index and the marketing restrictions index) can be effective. From the group interviews (NGT's) in the ALCOLAW project, several participants find it rather remarkable that alcohol promotion, marketing and the publicity of alcohol is still allowed. Even more, some sport events are named after their sponsor, e.g. Jupiler Pro League.

Recommendation 16: It is recommended to introduce effective regulation of alcohol marketing since this can contribute substantially to reducing alcohol-related harm by delaying the onset of drinking and by reducing the incentives to drink more (Anderson et al., 2012). Since social media open up a whole new way of marketing and targeted advertisements in which the alcohol industry is ahead of the game, regulation becomes even more pressing (Eurocare, 2017a). The results of the BELSPO financed study on alcohol marketing ALMOGERAL will present its policy recommendations on alcohol marketing in August 2018. In anticipation of these results, also other policy measures (see other recommendations in this document) should be prepared, since it is imperative to combine different interventions to have an impact on societal norms and individual behaviour.

Influence of SES

Considering the sparsity of research into the effect of socioeconomic status on adolescent alcohol consumption, the ALCOLAW project included socioeconomic status (SES) into its research questions. At the Belgian level three variables were tested:

- Family Affluence Scale which measures material wealth
- Perceived Family Wealth which measures the subjective perception of family wealth compared to other families
- Occupational Social Class which is based on questions on parents' occupational status

The main results seem contra-intuitive. In general, people assume adolescents with higher SES to be 'better off', which is normally the case for the majority of the health outcomes. In this sense we would expect less alcohol consumption in the higher SES group. However, the opposite is true from our analyses: adolescents with a higher (perceived) SES are associated with increased consumption. This is also confirmed by different other studies (De Doncker, De Donder, & Möbius, 2016; Huckle, You, & Casswell, 2010; WHO, 2014). Previous research has already shown distinct patterns of health inequalities related to alcohol consumption, with high SES leading to increased consumption, but low SES leading to heavy drinking and its associated health-related consequences (Grittner, Kuntsche, Gmel, & Bloomfield, 2013; Mackenbach et al., 2008). A possible explanation could be found in the affordability variable. As said before, alcohol consumption increases when affordability increases; the other way around: the higher the price, the lower the consumption rates. But this also implies that young persons who have more resources at home, have more alcohol available.

The impact of alcohol policy on both life time and weekly alcohol consumption differed according the level of material wealth within the family, in the sense that more stringent policies partially mitigated the effect of socioeconomic status. This finding shows that alcohol policies may contribute in reducing socioeconomic inequalities, i.e. reducing alcohol consumption relatively more in higher socioeconomic status groups characterized by relatively higher levels of alcohol consumption.

Recommendation 17: Therefore, in general, a more stringent alcohol policy can be recommended as it can reduce the overall level of alcohol consumption in society and especially within the group with the highest levels of consumption (i.e. high socioeconomic status groups). However, as noted under recommendation 15, the effect of pricing policy as a component of an integrated alcohol policy strategy should first be examined more closely from an economic and fiscal perspective.

Education

Parental supervision

Based on several results of the ALCOLAW project it can be concluded that parents are very important when it comes to educating children in alcohol consumption from an early age on. A study showed that young children form memory associations between alcohol and parties even in the preschool years and so before they ever drink alcohol themselves (Van Der Vorst et al., 2013). This result indicates that parents should pay attention to how they are introducing a drinking culture in their family. Even when young people grow up, it appears from our survey with youngsters in the ALCOLAW project that parental attitudes, in terms of supervision and control, continue to be associated to alcohol consumption, whereas the passive knowledge of the law appears non-significant.

Indeed, throughout several results from the youth data in the ALCOLAW project, family environment is revealed as an important environment for tasting and getting alcohol (46% of our sample said that they have already drank within a family context). This impact is particularly strong in the (young) category of 'low family drinkers'. We also see that more parental control and supervision seem to be associated with less alcohol use but also that parental control and supervision tend to decrease with age. Moreover, specific attitudes and rules towards alcohol at home seem related to abstainer profiles. The least parental control is seen in the groups of 'high stressed and explosive drinkers', with the lower level of parental supervision for the explosive drinkers profile, that we could link to binge drinking habits with friends. Finally, we observe that parents adopt more authoritarian styles for girls and more permissive parental style for boys, although boys seem more present in problematic profiles and drink more in current study.

In other research, it has also been attested that parents become less restrictive, allowing more autonomy as their children age (Zehe & Colder, 2014). Indeed, Handren and colleagues have showed that parents weight more on youngsters adolescents of 13 to 16 than on older youngsters of 17-18 who rely more on personal perceptions of harms (Handren, Donaldson, & Crano, 2016).

According to the respondents in the ALCOLAW project, some parents might not know the law and feel incapable to act. However, the study of Jackson (2002) strongly suggests that there is a potential for parents to improve the capacity of substance use prevention, presumably linked to parenting practice and parenting style (Jackson, 2002; Jackson, Ennett, Dickinson, & Bowling, 2012). Kaynak et al. (2014) conducted a literature review on the associations between parental alcohol provision and their underage child's alcohol use and alcohol-related problems. They found that parental provision of alcohol and a place to consume (besides offering sips, allowing and supervision of adolescent's use,

hosting an event, or furnishing alcohol), increased the alcohol use and sometimes alcohol-related problems. They concluded that parental provision leads to behavioural (i.e. the practice of drinking) as well as normative (the behaviour is approved by his parents (Jackson, 2002)) experiences. This in turn leads to the opposite effect as the intended belief, namely towards unsupervised drinking, more rapidly than it would have been without parental provision. Parents should be made aware that their influence is bigger than they might expect. This responsibility lies within their own drinking behaviour and drinking norms within their family environment, but also in their perseverance within parental supervision and parental rules in general. Our findings also indicate that older adolescents (including problematic drinkers profiles) perceive less parental attitudes, in general and specifically on alcohol exerted by their parents. Sensitization of parents to the consequences of drinking alcohol might strengthen their attitudes (to continue) towards (older) adolescents.

From the youth data in the ALCOLAW project, the low family drinkers profile (youths who start to drink into a family context) include youths who are similar to the abstainer profiles in terms of age (less than 16), parental attitudes (including rules toward alcohol at home) and understanding of the law. Youth from the low family drinkers profile do consume alcohol but no more than 1 or 2 glasses and they responded they didn't become sick or drunk as consequence of their drinking. Unfortunately, no longitudinal data was available on how this profile evolves over time.

Recommendation 18: There should be a clear emphasis on parental supervision and control in general, and specially on rules towards alcohol at home and the continuation of this supervision after children turn 16 year old. If family environments are chosen as the location for the first experimentations with alcohol, these experimentations should be associated with discussions about alcohol effects and the role and overall positive image of the alcohol in our society. The underlying goal pursued is to develop critical thinking about alcohol, not solely about effects but also about context and stereotypes (to have fun, you have to drink, etc.) and to correct misperceptions like supposed approval from parents or lack of influence by parents on adolescents behaviour. Campaigns towards parents to sensitise on their role towards alcohol drinking of their children and to ensure the continuation of supervision should be implemented, in combination with other measures like online tips and tricks how to discuss drinking alcohol with your children.

Integrated prevention

There is a consensus among the different participants in the group interviews (NGT's) in the ALCOLAW project that raising awareness among youngsters, as well as among parents and society, next to interventions for behaviour modification are indicated. A higher awareness and consciousness about the harmful aspects of alcohol consumption can be obtained by informing youngsters about health-related themes, for example through a media campaign (De Ruyver, 2009; Gelders et al., 2009). This informing doesn't automatically imply a behavioural change among youngsters. The change in behaviour is based on being well-informed, but this is not sufficient, the literature shows. Other interventions, like developing personal and communicative competencies are important, for example assertiveness, conflict and stress management, problem solving capacities and a positive self-esteem (VAD, 2009). The prevention literature points out that, especially for young people who already used alcohol, a moralistic approach of discussing the advantages and disadvantages of alcohol consumption in a terrifying way, has deterrent effect or can even be counterproductive (Vander Laenen, 2008; Werch & Owen, 2002). One suggestion could be to develop more prevention campaigns which include messages that work with adolescents' interests instead of insisting on passive knowledge and on

disadvantages of alcohol consumption. The example from one tobacco experimentation might be interesting (Gordon, Biglan, & Smolkowski, 2008). In this study, 'cool' messages that reinforce norms for non-tobacco use are presented to youths through video (for example not smoking is good to have friends, to be popular...).² Moreover, parents have been associated to enhance communication and reward behaviours about not using tobacco. Findings from this study suggest that efforts to influence parents to discourage their children's tobacco use and efforts to market an anti-tobacco perspective to teens are effective in preventing smoking.

Even more so, from the interviews in the ALCOLAW project it is stated that the focus should not be on problematizing, but on responsibility towards alcohol consumption. Nor should prevention only be targeted towards the youngsters, but also towards the parents (see recommendation 18) who can still be educated on the topic of alcohol consumption. On a macro level, actions on changing the drinking norms in Belgian society, should be in put in place. Furthermore, different other authors conclude that is important to combine regulations with education and enforcement (Babor et al., 2010; Newman, Shell, Major, & Workman, 2006). Therefore, it will be necessary for the different authorities to work together. The law on the level of the federal government and its regional preventive measures are complementary. More efforts on this should be made, because of the evidence that is being put forward by other countries in combining enforcement and education in multicomponent strategies. Also the sellers in the ALCOLAW project are largely in favour of a more integrated approach of the public policy on alcohol. This approach should - according to them - start very broadly, informing society on and convincing society of the risks of alcohol (ab)use, and explaining the law, insisting on its provisions.

Recommendation 19: It is recommended not to have unilateral prevention interventions, but looking for an integrated prevention approach. Raising awareness and consciousness with campaigns are not enough and should be combined with other interventions of school-, community- and family based type completed with environmental strategies. These interventions should start from the interest of the young people and focus on decision making competences. Furthermore, prevention should not solely focus on one target group but address different target groups, and should be supported by other measures like regulations on the societal level and enforcement. This will urge different authorities to work together in one integrated alcohol approach.

Legislation versus policy

It can be recommended to focus more on a global integrated policy and not solely on legislation. Next to legislation there are also other important aspects, like all these mentioned above (education, prevention,...), which can be changed more easily. In the ALCOLAW study a wider array of policies that restrict alcohol availability was evaluated and a significant relation was found between stricter policies and lower odds of weekly alcohol consumption. An important caveat in this research is the failure to incorporate enforcement of the above policies into the analysis. For example, the most spectacular decreases for all outcome measures are observed in Anglo-Saxon countries. These countries, especially the United Kingdom, have greatly increased their enforcement efforts during the research period. Unfortunately, such information was not systematically available for Belgium. So, more strict policies can be effective for the general population, however, we should pay attention for iatrogenic effects

² At a local level in Belgium, the bill campaign (« do like Bill ») from the white night chain uses this kind of message.

within the group of problematic drinkers. Further research on the topic of policy measures is recommended, especially the effect of multi-component strategies.

Recommendation 20: The debate on alcohol in our society should not focus primarily on legislation, but give more priority on a global integrated alcohol policy. Furthermore, a lot of measures are necessary but insufficient to change drinking behaviour in Belgium. A multi-component approach is needed where prevention, regulation and enforcement are necessary pillars to include. From a health perspective the integrated alcohol policy should mainly focus on the price of alcohol, availability and marketing restrictions as outlined above (Van Hoof, 2017).

All data available

Within Belgium, three major surveys exist that incorporate questions on alcohol consumption and are specifically aimed at school-aged children: Health Behaviour in School-aged Children (HBSC), VAD-leerlingenbevraging (VADLLB) and Viaspad (is part of the European School Survey Project on Alcohol and Other Drugs (ESPAD)). Despite our best efforts however, we have only been able to collect data from HBSC and VADLLB in the ALCOLAW project.

Recommendation 21: We advise that the principal investigators (PI's) of all studies on alcohol consumption specifically aimed at school-aged children carry on their past efforts to insure the continued comparability of the studies, most notably in areas where there are currently still discrepancies (e.g. definition of binge drinking/drunkenness). Moreover, PI's should debate which external factors are key to adolescent drinking behaviour (e.g. peer drinking, SES) and agree on a common approach, in order to facilitate future research.

Also other data collections are not always willing to share more data than is currently available online for secondary analysis, e.g. the WHO was very reluctant to give up GISAH information beyond what is available on their website (http://www.who.int/substance_abuse/activities/gisah/en/). More formal agreements between different organisations should be made on the access of different data.

Recommendation 22: The Belgian government should include in their formal agreements the rights to access to data collected in studies financed by the different Belgian authorities for secondary analysis. Call for grants could include secondary analysis on available data instead of collecting new data.

To establish the effects of the amended minimum legal drinking age on adolescent health consequences, data was collected both at the Belgian level, through the Belgian Federal Public Service Health (<https://www.health.belgium.be/en>) and at the European level through the EU Injury Database (https://ec.europa.eu/health/data_collection/databases/idb_en). The addition of more detailed information on socio-economic status and other relevant external influences could be useful to provide a more in-depth analysis.

Recommendation 23: Specifically, it is recommended to add a quick SES indicator (e.g. educational level) to the Minimum Hospital and the Minimum Psychiatric Data.

The EU Injury Database also provides valuable data, however was rendered useless because Belgium does not provide data to Eurosafe, the network organizing the database.

Recommendation 24: In order to perform an international analysis, we recommend that the Belgian state participates in the EU Injury Database project.

Finally, we decided after thorough research of the data of the Federal Police and the Department of Justice that the data on youth criminality collected by both authorities, does not have the level of detail required to analyze the impact of legislation on youth criminal offenses. The protocol to an offence does not include the measurement of the level of alcohol use by the young person.

Recommendation 25: To enable a more accurate estimation of the substance attributable fractions, case registration on all levels of the criminal justice system should mandatory include registration of substance intoxication and substance involvement. This should be done for every substance separately. At present, this registration is already possible on the investigation level (in the police reports of the integrated police) although this is not mandatory (Vander Laenen et al., 2015).

Global conclusion

The debate on alcohol in our society should not focus primarily on legislation or on the young people, but give more priority on a global integrated alcohol policy targeting different groups on a micro, meso and macro level. Parents are an important group to reach, but also on a societal level the need for rethinking the place of alcohol is recommended.

From research it can be concluded that a lot of measures are necessary but insufficient to change drinking behaviour in Belgium. A multi-component approach is needed where prevention, regulation and enforcement are necessary pillars to include (on different policy levels). From a health perspective the integrated alcohol policy should mainly focus on the price of alcohol, availability and marketing restrictions as outlined above (Van Hoof, 2017). We also recommend introducing alcohol labels, a reference age and more enforcement to increase the compliance with the current or future law.

List of recommendations

1. Since no unique effect of the minimum legal drinking age of 2009 was found in the analysis in the ALCOLAW project, nor a consensus was found within the different groups of stakeholders, in combination with the conflicting results on alcohol consumption which can be observed in other studies, we recommend to not prioritise the increase of the minimum legal drinking age. At this moment, the scientific evidence doesn't support a future change in the law unequivocally, although this means Belgium will maintain its position to be one of the few EU countries with this low age limit.
2. In future years secondary analysis should be conducted on the data of the Minimal Hospital Data and the Minimal Psychiatric Data to analyse the impact on health-related outcomes of the 2009 law on the general group of young people.
3. Prohibition does not suffice for young people, therefore, we recommend to focus on educating and supporting young people in making healthy choices, and informing them on all aspects on the use of alcohol. This can include information campaigns and interventions aimed at the general population, but also towards parents, youngsters, students, etc. Information (campaigns) is just one component and should be imbedded in a more global integrated approach (see for more information the part on integrated prevention, recommendation 19).
4. The focus of alcohol interventions **should not be solely on the young people**. Since drinking is part of the Belgian culture, sensitising interventions can question the role of alcohol in our culture, like the alcohol abstinence challenge Tournée Minerale (BE) or Dry January (UK).
5. Local governments should be motivated to implement **a multicomponent strategy** in their cities. The combination of responsible beverage trainings, with **law enforcement, media advocacy and other prevention initiatives** (e.g. introducing age bracelets) raises the effectiveness of the intervention. For this, collaboration can be searched for with the local prevention service who can develop an integrated prevention approach tailor made for the local context and together with the different stakeholders.
6. We recommend to implement **alcohol labels** for alcoholic beverages which include the minimum legal age to purchase the beverage next to some global health warnings and consumer information. This minimum age can support the seller to comply and all information is given to the consumer so he/she can make a well-informed choice.
7. A study is recommended to calculate the potential benefits and relatively low cost of alcohol labelling in Belgium.
8. The recommendation is to introduce a legislation which makes it **legally required to ask for the age** of a customer before selling alcohol. We recommend a reference age of 25 years. Introducing this new legislation will need communication, guidelines on how to ask for this age and control actions.
9. **More enforcement** actions to check the compliance with the minimum legal age by the sellers (horeca, supermarkets, night shops, public parties) should be undertaken. The frequency should be balanced so the sellers have the impression that they are checked two or three times a year. Ideas on the operationalisation can be found in other countries. E.g. the first control can be followed by a warning, while the second one is only conducted within the group of non-compliers, etc. **Communication** (broadcast, targeted communication, locally, nationally, social media) can increase the compliance of the sellers.
10. The law should clearly define the fines following law violations. More clarity should be given in this legislation on who can be fined in the case of underage selling.

11. Mystery shopping can be conducted at the local level for prevention aims and can be used at the federal level as a control strategy in enforcement actions. The federal government should use this method to increase the controls and the local government to analyse their local compliance rates. These interventions should be coordinated and well planned with the local authorities (mandated through the local prevention worker/horeca coordinator). For both intentions the detailed protocol of VAD can be used (see <http://www.vad.be/artikels/detail/aan-de-slag-met-de-lokale-monitor-alcohol-jongeren>). Caution is recommended for possible undesired side-effects of introducing youngsters in these actions.
12. As written in the European Journal of Public Health there is a clear need for countries in Europe to develop comprehensive alcohol policies. From a health perspective this should mainly focus on the price of alcohol, availability and marketing restrictions as outlined above (Van Hoof, 2017).
13. In Belgium it seems not feasible in the current context (economic interests, different levels of authorities, no public support,...(Lievens et al., 2016)) to limit the selling of alcohol to specialised shops like in Australia or Canada, however other actions can be undertaken. On a local level limiting the availability and easy access to alcohol in certain areas (around football stadiums, schools,...) in the cities or with certain events/festivities (carnival,...) is recommendable. Also locations where unsupervised drinking is being observed (e.g. vending machines), limitations on the selling of alcohol should be put in place. Local authorities should also criticize their own licensing policy.
14. Since it is hard to operationalise the selling of limited quantities e.g. in a bar, it is recommended to include information related to drinking behaviour and decision making skills. This could include maximum amounts, frequency of drinking, avoiding possible problematic drinking patterns etc. The VAD already wrote guidelines on the use of alcohol, see <http://www.vad.be/assets/2281>.
15. From the scientific information we have now, it is recommended to not withdraw the extra taxation on alcohol from 2015. However, future price increases (taxation or minimum unit pricing) should be further examined from an economic perspective. The increased taxes of 2015 can be an opportunity to study this more into detail. Additional research taking into account the economic and thus overall societal impact is required. The overall welfare effect of pricing policy can be studied using a general equilibrium approach in which the fiscal effect is incorporated and the welfare effect of different price levels can be simulated (Buyse, Heylen, & Van de Kerckhove, 2017; Heylen & Van de Kerckhove, 2013).

Local authorities should discourage promotional actions on alcohol at parties, like forbidding all-in parties where you can drink as much as you can for the same price or discourage the use of so-called booze cards.
16. It is recommended to introduce effective regulation of alcohol marketing since this can contribute substantially to reducing alcohol-related harm by delaying the onset of drinking and by reducing the incentives to drink more (Anderson et al., 2012). Since social media open up a whole new way of marketing and targeted advertisements in which the alcohol industry is ahead of the game, regulation becomes even more pressing (Eurocare, 2017a). The results of the BELSPO financed study on alcohol marketing ALMOGERAL will present its policy recommendations on alcohol marketing in August 2018. In anticipation of these results, also other policy measures (see other recommendations in this document) should be prepared, since it is imperative to combine different interventions to have an impact on societal norms and individual behaviour.

17. Therefore, in general, a more stringent alcohol policy can be recommended as it can reduce the overall level of alcohol consumption in society and especially within the group with the highest levels of consumption (i.e. high socioeconomic status groups). However, as noted under recommendation 15, the effect of pricing policy as a component of an integrated alcohol policy strategy should first be examined more closely from an economic and fiscal perspective.
18. There should be a clear emphasis on parental supervision and control in general, and specially on rules towards alcohol at home and the continuation of this supervision after children turn 16 year old. If family environments are chosen as the location for the first experimentations with alcohol, these experimentations should be associated with discussions about alcohol effects and the role and overall positive image of the alcohol in our society. The underlying goal pursued is to develop critical thinking about alcohol, not solely about effects but also about context and stereotypes (to have fun, you have to drink, etc.) and to correct misperceptions like supposed approval from parents or lack of influence by parents on adolescents behaviour. Campaigns towards parents to sensitise on their role towards alcohol drinking of their children and to ensure the continuation of supervision should be implemented, in combination with other measures like online tips and tricks how to discuss drinking alcohol with your children.
19. It is recommended not to have unilateral prevention interventions, but looking for an integrated prevention approach. Raising awareness and consciousness with campaigns are not enough and should be combined with other interventions of school-, community- and family based type completed with environmental strategies. These interventions should start from the interest of the young people and focus on decision making competences. Furthermore, prevention should not solely focus on one target group but address different target groups, and should be supported by other measures like regulations on the societal level and enforcement. This will urge different authorities to work together in one integrated alcohol approach.
- 20. The debate on alcohol in our society should not focus primarily on legislation, but give more priority on a global integrated alcohol policy. Furthermore, a lot of measures are necessary but insufficient to change drinking behaviour in Belgium. A multi-component approach is needed were prevention, regulation and enforcement are necessary pillars to include. From a health perspective the integrated alcohol policy should mainly focus on the price of alcohol, availability and marketing restrictions as outlined above (Van Hoof, 2017).**
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24. In order to perform an international analysis, we recommend that the Belgian state participates in the EU Injury Database project.
25. To enable a more accurate estimation of the substance attributable fractions, case registration on all levels of the criminal justice system should mandatory include registration of substance intoxication and substance involvement. This should be done for every substance separately. At present, this registration is already possible on the investigation level (in the police reports of the integrated police) although this is not mandatory (Vander Laenen et al., 2015).

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