

Alcohol as a public health issue in Croatia

Situation analysis and challenges





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By
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Abstract

Harmful use of alcohol, as well as addiction, exerts a significant medical, social and economic burden on societies. This report provides a situation analysis of alcohol consumption, alcohol-related harm, and existing policy measures in Croatia, and explores areas that would benefit from further strengthening. Despite a decline in consumption over time, the report concludes that there is still a long way to go in reducing the harmful use of, and disorders caused by, alcohol. The launch of a comprehensive alcohol strategy for the upcoming period and a national action plan would help in combating the harms related to alcohol use, as would the establishment of some form of a high-level State and independent body or council.

Keywords

Alcoholism - prevention and control
Alcohol Drinking - adverse effects
Alcohol Drinking - prevention and control
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Contents

Acknowledgements	v
Abbreviations	vi
Foreword	vii
Introduction	1
Alcohol consumption in Croatia	3
Trends in the levels and patterns of adult alcohol consumption.....	3
Trends in alcohol consumption among young people.....	6
Alcohol-related harm in Croatia	9
Alcohol-attributable mortality.....	9
Alcohol-related hospitalizations due to mental and behavioural disorders.....	11
Alcohol-related road crashes and other alcohol-related harm.....	12
Measures to reduce the harm caused by alcohol in Croatia	15
Leadership, awareness and commitment.....	15
National alcohol policy documents.....	15
Guidelines and recommendations.....	17
Health services' response.....	18
Screening and brief interventions for hazardous and harmful drinking.....	18
Treatment services for alcohol use disorders in the health system.....	18
Community actions and campaigns.....	19
Drink–driving policies and countermeasures.....	20
Availability of alcohol.....	21
Pricing policies.....	21
Marketing and labelling of alcoholic beverages.....	21
Conclusions: a long way to go despite improvements	22
References	24

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Abbreviations

ABV	alcohol by volume
AUDIT	Alcohol Use Disorder Identification Test
APC	alcohol per capita consumption
BAC	blood alcohol concentration
CAGE	Cut down, Annoyed, Guilt, Eye-opener
CIPH	Croatian Institute of Public Health
CVD	cardiovascular disease
DALY	disability-adjusted life-year
EHIS	European Health Interview Survey
ESPAD	European School Survey Project on Alcohol and Other Drugs
EU	European Union
FAS	fetal alcohol syndrome
HBS	Household Budget Survey
HED	heavy episodic drinking
HFA-DB	European Health for All database
HBSC	Health Behaviour in School-aged Children
NCD	noncommunicable disease
NGO	nongovernmental organization
OCDA	Office for Combating Drug Abuse
OECD	Organization for Economic Co-operation and Development
pFAS	partial FAS
TAC	treated alcoholics' club
WHO	World Health Organization

Foreword

Despite a nearly 10% decrease in the past decade, total alcohol per capita consumption among adults in the WHO European Region remains the highest in the world, resulting in a significant burden of morbidity and mortality. Reflecting the diversity of the Region, there is considerable variation among Member States in levels and patterns of drinking and alcohol-related harm. In Croatia, the level of total alcohol per capita consumption exceeds the WHO European Region average, as do the rates of alcohol-attributable adult mortality due to liver cirrhosis and cancers.

This analysis of the alcohol situation in Croatia presents a detailed report of consumption among adults and youth, alcohol-related harm and existing policy measures. Alcohol consumption is deeply rooted in Croatian society, but in recent years, a range of actions have been undertaken at the national and local levels to address the harmful use of alcohol. Croatia has a national strategy for the prevention of harmful alcohol use and alcohol-related disorders, as well as policy measures, such as a legal ban on the sale of alcohol to minors. Furthermore, there has been increasing interest in community-level projects that address alcohol consumption among young people, often supported by the government and ministries. However, other important public health interventions, as recommended in the European action plan to reduce the harmful use of alcohol 2012–2020, have not been implemented, such as additional restrictions related to opening hours and days or place of alcohol sales, provision of health information on containers, and price measures other than taxes.

Considering the high consumption levels in Croatia, it is hoped that this report will be a useful resource for policy-makers, and that the information and analysis provided will spur further interest in developing policy measures to tackle alcohol-related harm.

Gauden Galea Director

Division of Noncommunicable Diseases and Promoting Health through the Life-Course, WHO
Regional Office for Europe

Introduction

Alcohol is the fifth leading risk factor for mortality and disease in the world; 5.1% of disability-adjusted life-years (DALYs) and 5.9% of deaths are caused by the harmful use of alcohol (1). In central and eastern Europe, alcohol is the fourth leading risk factor for disease and mortality. Alcohol consumption is not only one of the four modifiable risk factors for noncommunicable diseases (NCDs), but also increases the risk for various infectious diseases (2). The harm caused by alcohol includes chronic illnesses such as cardiovascular diseases (CVD), liver disease and cancer, as well as acute harm caused by alcohol poisoning and road crashes. The costs related to the harm caused by alcohol, however, extend beyond ill-health and mortality; harmful use of alcohol, as well as addiction, exert a significant medical, social and economic burden on societies and thus contribute to the loss of productivity (3). Croatia, like many other countries in Europe, aims to reduce the harmful use of alcohol by introducing public health interventions and comprehensive policy measures, as recommended in the *European action plan to reduce the harmful use of alcohol 2012–2020* (4).

Drinking alcohol is culturally and socially acceptable, and is deeply rooted in Croatian culture (5). However, differences in culture and lifestyle are reflected in regional differences related to alcohol consumption (6). The area along the coast and the continental part of Croatia has many indigenous types of wine, as well as production and consumption of other types of alcohol (7). In the Slavonia region, production of plum brandies is a long-standing tradition (8). Domestically manufactured products have a particular place in Croatian people's lives, which may explain why wine and spirits that are domestically and traditionally produced are perceived as being less harmful. This was shown in a study that investigated the motivation of urban consumers to buy traditional food products in Croatia, including alcoholic beverages. Consumers reported buying traditional food because of perceptions relating to better taste, and production using traditional ingredients and by trustworthy persons. In addition, consumers reported feeling happy after consuming traditional food products, as it was a way to connect with their childhood and also represented healthy food (9).

Historically, alcohol was used in households as a medicine, whereas modern medicine regards alcohol a psychoactive drug (10). For example, in parts of Croatia, such as in the Istria region, wine was considered to be good for the blood. In other areas, where malaria previously existed, brandy ("rakija") was ingested to prevent contracting the disease (5). Recent research has shown that some women believe that alcohol can have positive effects on pregnancy outcomes; specifically, that drinking red wine prevents anaemia and that drinking beer towards the end of the pregnancy can increase lactation (11).

Research concerning attitudes towards alcohol consumption suggests that the use of alcohol is accepted within society, and the risks with heavy episodic drinking are acknowledged. According to a 2015 survey of a representative sample of Croatian citizens between the ages of 15 and 64 years, more than half of the adults (57.9%) and three fifths of young adults (61.3%) find it acceptable to have one or two drinks a few times a week (12). Furthermore, the results show that men are more likely than women to believe that consuming one to two drinks per week is acceptable, although older people are less likely to approve of such behaviour. According to the

same survey, 32.6% of adults considered the risk associated with having five or more drinks every weekend to be large, while 37.4% reported the risks as moderate, and 22.9% as low.

Overall, alcohol consumption in the adult population has decreased in the past two decades, yet the total alcohol per capita consumption (APC) is higher than the WHO European Region average and the European Union (EU) average (13). Furthermore, the trend in consumption among young people in Croatia is a cause for concern; among the countries included in the European School Survey Project on Alcohol and Other Drugs (ESPAD), Croatia is the only country where alcohol use has increased over time among students. The prevalence of alcohol use increased by 10% between 1995 and 2015 (14).

According to the Croatian Encyclopedia, an alcoholic beverage is defined as a “drink which contains between 3% and 80% of ethyl alcohol (ethanol)”. Depending on the content of alcohol, measured as alcohol by volume (ABV), alcoholic beverages can be divided into three categories: (i) weak beverages (e.g. wine and beer); (ii) fairly strong beverages (e.g. vermouth, sherry and liquors); and (iii) strong beverages (e.g. whiskey, vodka, gin and brandy) (15). However, within Croatian legislation, such as the Trade Act (16), and the Hospitality and Catering Industry Act (17), alcohol is defined as “alcoholic beverages or other beverages that contain alcohol”. The Act on the Prevention of Disorder at Sports Competitions (18) defines alcohol as “any beverage that contains alcohol”. As a subject of taxation, the Excise Duty Law (19) considers alcoholic beverages as “beer, wine, and other drinks that are obtained by fermentation other than beer and wine, intermediate products and ethyl alcohol” (art. 53). Furthermore, the Ordinance on Strong Alcoholic Beverages (20) defines strong beverages as containing at least 15% ABV and intended for human consumption. In accordance with the legislation on providing information and promotions related to agricultural products and certain food products derived from agricultural sources, beer is included (21).

Despite existing policy measures, such as a legal ban on the sale of alcohol to minors (16, 17), reports by the inspection services have indicated that these laws are violated (22). Furthermore, there are no restrictions at the national level for on- and off-premise sale of alcohol in relation to opening hours or days, no obligations for health information on containers, no price measures other than taxation, and no restrictions on selling alcohol at petrol stations (23). Alcohol retailers can play an important role in implementing the ban on sale of alcohol products to minors. To reduce alcohol use among minors, retailers and servers have to comply with the law.

The aims of this report are (i) to provide a situation analysis of alcohol consumption, alcohol-related harm, and existing policy measures in Croatia, and (ii) to explore the need and propose areas for further strengthening of the alcohol policy in the country, in line with the *Global strategy to reduce the harmful use of alcohol* (24) and the *European action plan to reduce the harmful use of alcohol 2012–2020* (4).

Alcohol consumption in Croatia

Trends in the levels and patterns of adult alcohol consumption

Alcohol consumption in the WHO European Region is higher than in any other WHO region of the world (1). According to the WHO *Global status report on alcohol and health 2014*, the total APC (in litres of pure alcohol) in the adult (15+ years) population of the WHO European Region was 10.9 L, compared to the world average of 6.2 L. Among drinkers only, the APC was 16.8 L, slightly less than the world average of 17.2 L (see Table 1).

Table 1. Total alcohol per capita consumption (in litres of pure alcohol) and prevalence of heavy episodic drinking (%) in total population aged 15 years or older (15+ years) and among drinkers (15+ years) by WHO region and the world, 2010

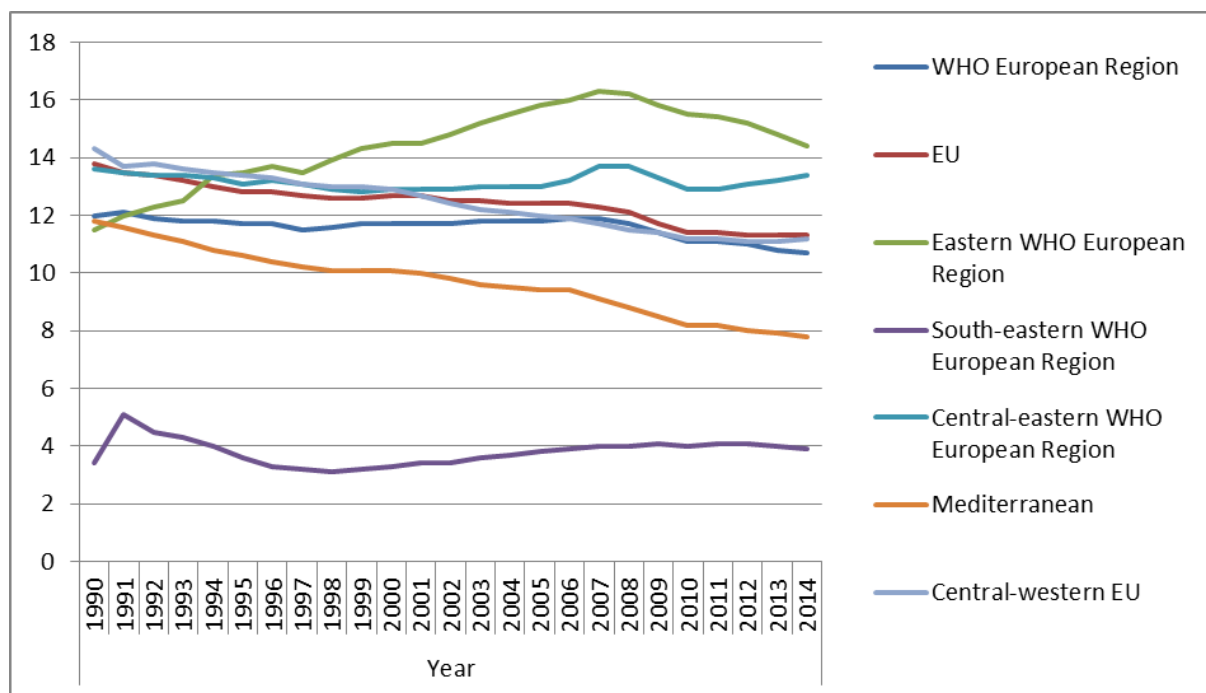
WHO Region	Among all (15+ years)		Among drinkers only (15+ years)	
	Total APC (in litres)	HED prevalence (%)	Total APC (in litres)	HED prevalence (%)
African Region	6.0	5.7	19.5	16.4
Region of the Americas	8.4	13.7	13.6	22.0
Eastern Mediterranean Region	0.7	0.1	11.3	1.6
European Region	10.9	16.5	16.8	22.9
South-East Asia Region	3.4	1.6	23.1	12.4
Western Pacific Region	6.8	7.7	15.0	16.4
World	6.2	7.5	17.2	16.0

Source: Global status report on alcohol and health 2014 (1). APC: alcohol per capita consumption; HED: heavy episodic drinking

Analyses of the trends in alcohol consumption and alcohol-attributable mortality in the WHO European Region from 1990 to 2014 have shown great variability between countries. Since 1990, there have been considerable political changes within the Region, and countries such as Croatia have become politically independent. As a result, drinking patterns have become similar among countries, with less dominating drinking styles within countries (13).

In the past 25 years, adult APC decreased by about 11% in the WHO European Region, with the most prominent changes around 2007. The largest decrease was evident in the Mediterranean countries (Cyprus, France, Greece, Italy, Malta, Portugal, Spain), primarily because of a decrease in wine consumption in France, Greece, Italy, Portugal and Spain. The central-eastern part of the EU (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) had stable consumption between 1990 and 2014. Consumption in the eastern part of the WHO European Region (Russian Federation, Belarus, Republic of Moldova and Ukraine) increased from the second lowest in 1990 to being the highest of all subregions in 2014. The south-eastern part of the Region (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan) has the lowest alcohol consumption of all subregions (13) (see Fig. 1).

Fig. 1. Trends in adult per capita alcohol consumption in the WHO European Region and selected subregions, 1990–2014



Source: Public health successes and missed opportunities – trends in alcohol consumption and alcohol-attributable mortality in the WHO European Region, 1990–2014 (13).

In Croatia, the total APC in 2014 was 12.2 L, compared to 15.7 L in 1990. Fig. 2 shows that consumption has fluctuated over time, but a downward trend is evident from around 2003. Both recorded and unrecorded APC has declined; recorded from 13.5 L in 1990 to 11.1 L in 2014, and unrecorded from 2.2 L in 1990 to 1.8 L in 2014. This decrease was also evident in the European Region, where total consumption decreased from 12.0 L in 1990 to 10.7 L in 2014. Unrecorded consumption decreased from 2.5 L to 2.0 L, and recorded APC decreased from 9.6 L to 8.7 L in the same period. The same trend was evident for the EU countries as a whole, as well as the central-western EU countries (*see* Fig. 1) (13).

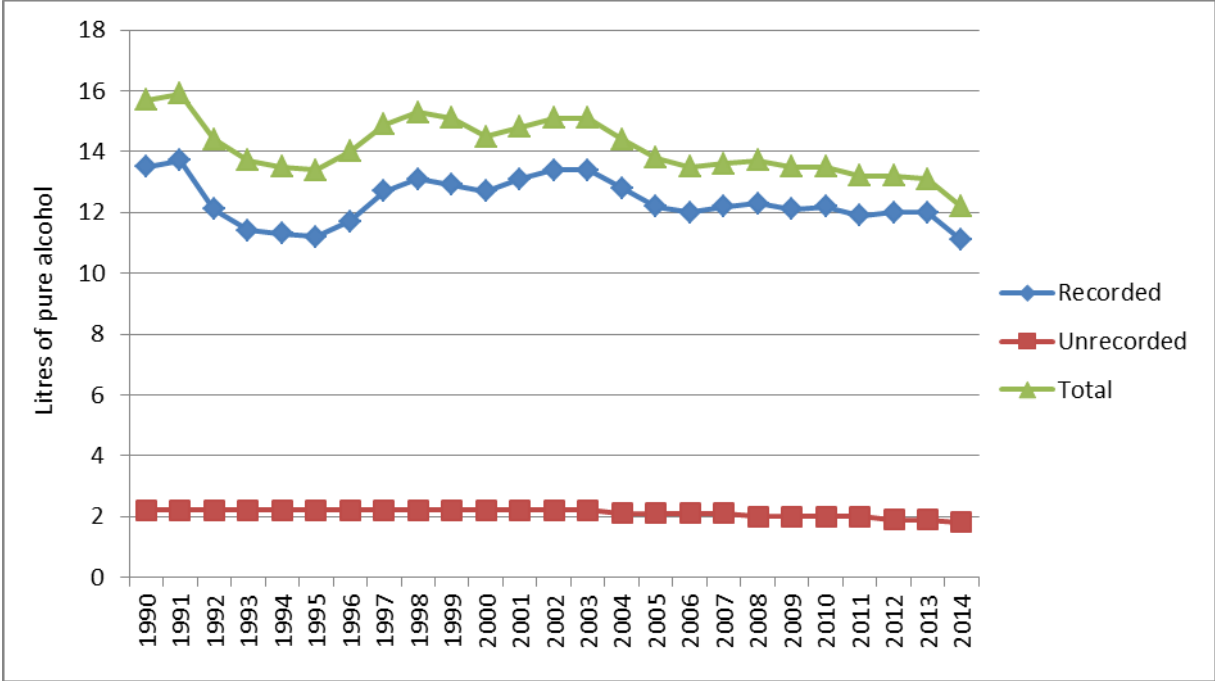
Considering drinkers only, the APC for Croatian adults is 15.1 L, slightly lower than the WHO European Region average of 16.8 L. There is a considerable gender difference in alcohol consumption in Croatia; men consume approximately twice the amount that women do (19.3 L and 10.1 L of pure alcohol, respectively, among drinkers only) (1).

The marked decrease in APC in Croatia is evident in the three categories of alcoholic beverages (spirits, wine and beer). In 2011, spirits accounted for 15% of the total APC, wine 42% and beer 43%. In conclusion, the amount of alcohol consumed as beer is similar to that of wine, and both considerably exceed the consumption of spirits (25).

Data on alcohol consumption in Croatia is also available from national surveys, specifically from the Household Budget Survey (HBS), which is conducted as a multiyear survey among private (non-institutionalized) households in Croatia. Data are reported on the annual average

consumption of food and beverages purchased by the household, food and beverages consumed from own production, and food and beverages received as gifts, per household member. The most recent HBS data from 2014 indicated that the consumption of alcoholic beverages was 25.1 L (overall consumption by beverage volume, not in litres of pure alcohol) per household member, of which 15.6 L was beer, 9.0 L wine, and 0.5 L spirits (26).

Fig. 2. Trends in recorded, unrecorded and total alcohol per capita consumption in Croatia, 1990–2014



Source: Public health successes and missed opportunities – trends in alcohol consumption and attributable mortality in the WHO European Region, 1990–2014 (13).

In 2011, research on substance use was conducted for the first time in the general population of Croatia by the Ivo Pilar Institute of Social Sciences, at the initiative of the governmental Office for Combating Drug Abuse (OCDA). The primary aim of the study was to collect data on the prevalence of use of addictive substances in the general population, as well as relevant subgroups. The findings indicated that 92.5% of men and 80.3% of women had consumed alcohol in their lifetime; 81.1% of men and 62.5% of women had consumed alcohol in the past year; and 74.3% of men and 47.2% of women had consumed alcohol in the past month (27). In 2015, a second study was carried out, which showed that 89.0% of men and 83.6% of women reported having ever consumed alcohol. The prevalence of alcohol consumption in the past year was 80.1% among men and 66.2% among women. Compared to the 2011 findings, the prevalence of alcohol consumption in the past month had decreased; 68.4% of men and 46.3% of women reported any use in the past month. The results also showed that 11.4% of adults reported consuming six or more glasses of alcoholic drinks¹ on one occasion once per month, while 7.2% reported consuming this quantity once per week, and 0.9% reported drinking six glasses or more on a daily basis (12).

¹ One drink equals one 200 mL glass of wine, one 330 mL or 500 mL glass or bottle of beer, or one 30 mL glass of spirits.

Regarding patterns of drinking, data from the WHO *Global status report on alcohol and health 2014* indicates that only 8.1% of Croatians are lifetime abstainers (4.0% of men and 11.8% of women). Furthermore, 11.4% of Croatians have consumed alcohol in their lifetime, but not in the past 12 months (former drinkers) (4.2% of men and 17.9% of women). Heavy episodic drinking (HED) in the past 30 days is reported by 13.4% of drinkers (22.4% of men and 2.8% of women). Finally, the prevalence of alcohol use disorders is 5.1%, compared to 7.5% in the European Region. Among men, the prevalence is 8.6%, and among women, 1.9% (1).

According to the Special Eurobarometer on EU citizens' attitudes towards alcohol in 2007, 58% of respondents (15+ years) from a household sample in Croatia reported drinking any alcoholic beverage (beer, wine, spirits, cider or other local beverages) in the past 30 days. Of these, 18% reported consuming alcohol daily (EU25² 13%); 6% 4–5 times per week (EU25 8%); 18% 2–3 times per week (EU25 23%); 22% once a week (EU25 25%); 19% 2–3 times per month (EU25 17%); and 16% (EU25 13%) had consumed alcohol only once in the past 30 days. With regard to excessive drinking, 10% of Croatian survey participants in 2007 reported having had five or more drinks³ on one occasion several times a week in the past 12 months, while for the EU25, this was reported by 13% of respondents (28). Data from the European Health Interview Survey (EHIS) conducted in Croatia in 2014–2015 showed that 9.1% of respondents consume alcohol daily, 14.9% at least once a week, 19.9% less than once per week, while 56.2% rarely or never drink alcohol (29).

Trends in alcohol consumption among young people

The drinking habits of schoolchildren in Croatia are monitored through the ESPAD, which has been conducted every four years since 1995 in over 30 European countries. Croatia has participated in the survey since 1995. In 2015, the study was conducted for the sixth time in a representative sample of 2558 students born in 1999 (average age of the students was 15.7 years). Overall, 92% of students had consumed alcohol at least once in their life (94% of boys and 91% of girls), and 82% of students had consumed alcohol in the past 12 months (84% of boys and 80% of girls). Furthermore, 55% of students had consumed alcohol in the past 30 days (60% of boys and 49% of girls). Data from the ESPAD also showed that while boys still drink more, the increase in drinking frequency among girls is notable.

Fig. 3 and Fig. 4 show the trends in lifetime use, use in the past 12 months, and use in the past 30 days across the six ESPAD waves (1995–2015) for boys and girls (14).

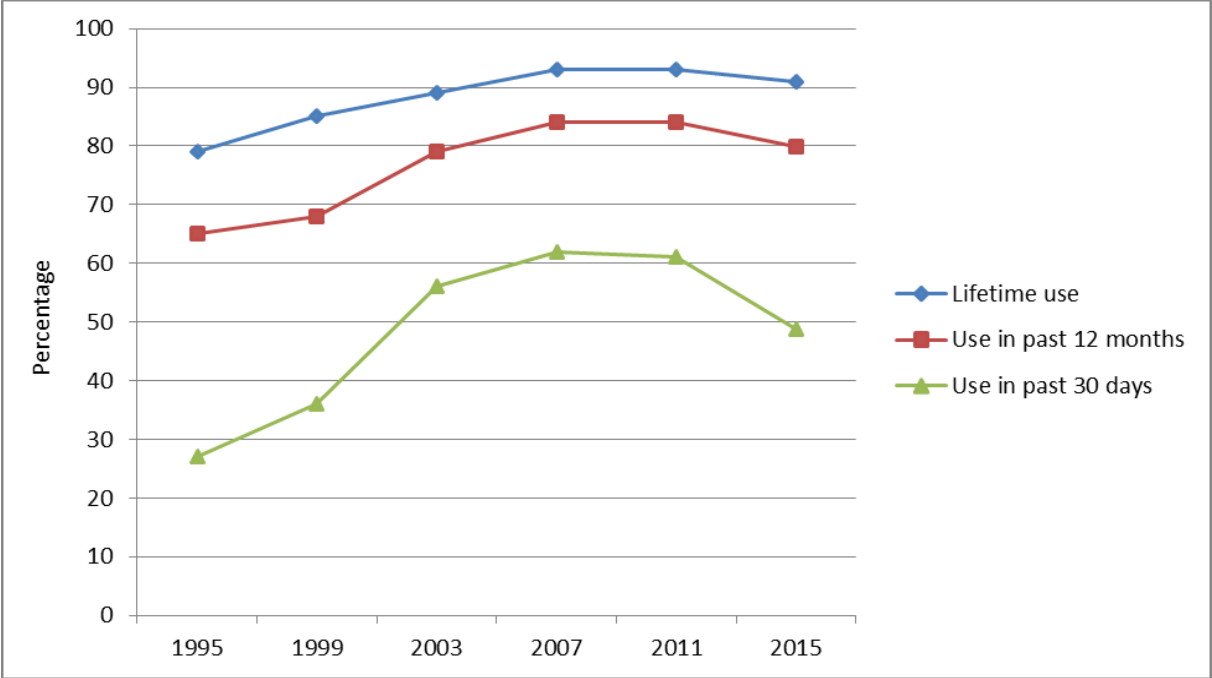
Overall, 55% of students reported drinking alcohol in the past 30 days in 2015, and in both boys and girls, the prevalence of use in the past 30 days decreased between 2011 and 2015 (71% to 60%, and 61% to 49%, respectively). Of all students, 47% reported consuming five or more drinks on one occasion in the past 30 days, which was a decrease from 54% in the previous

²The EU was established on 1 November 1993 with 12 Member States. The number of Member States has grown to the present 28 through a series of enlargements. EU 25 was the enlargement that took place 1 May 2004–31 December 2006 (http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:EU_enlargements, accessed 10 February 2017).

³ One drink equals one 150 mL glass of wine, one 330 mL can or bottle of beer or cider, or one 40 mL glass of spirits.

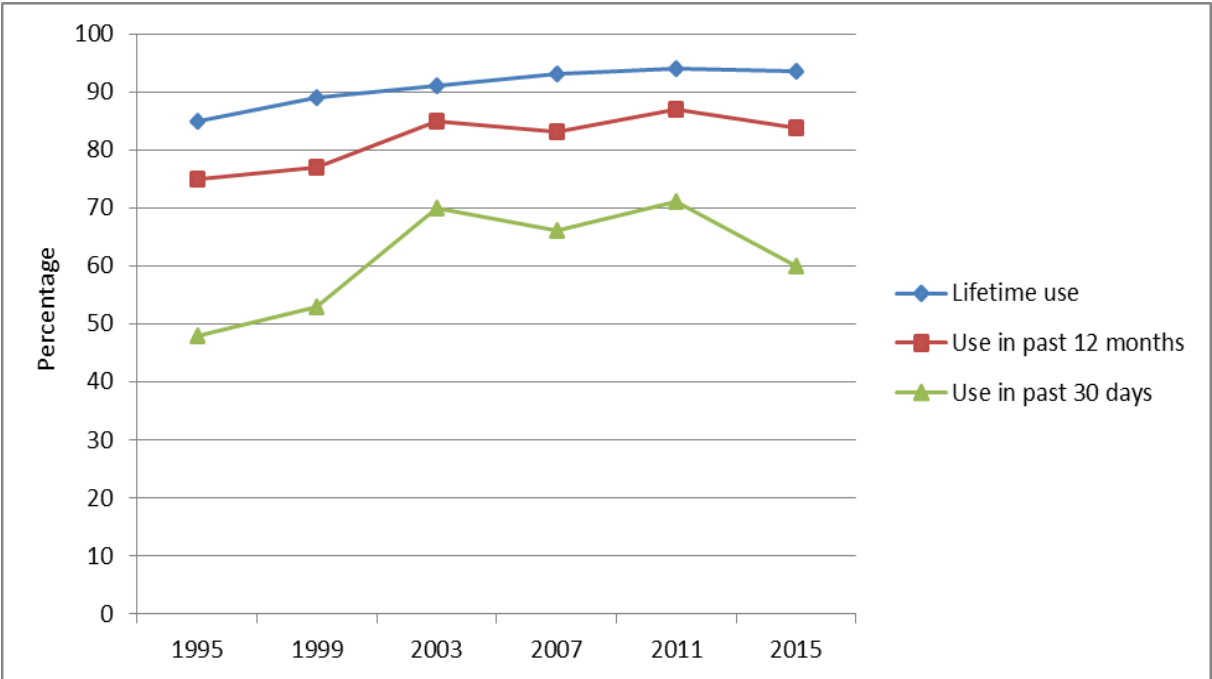
survey wave. There was a marked reduction in this indicator for both boys and girls (from 59% to 51%, and from 48% to 42%, respectively) (Fig. 5) (14).

Fig. 3. Prevalence of use of any alcoholic beverage during the lifetime, past 12 months, and past 30 days among 15-16-year-old girls in Croatia, 1995–2015



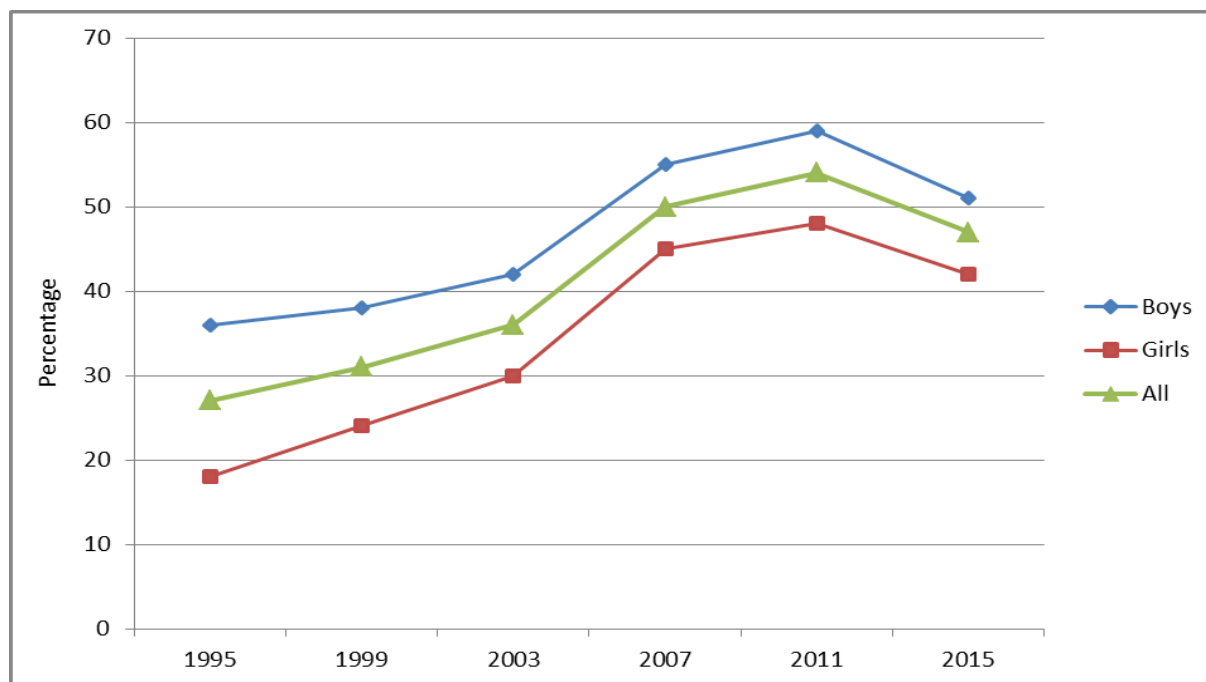
Source: ESPAD 1995–2015 (14).

Fig. 4. Prevalence of use of any alcoholic beverage during the lifetime, past 12 months, and past 30 days among 15–16-year-old boys in Croatia, 1995–2015



Source: ESPAD 1995–2015 (14).

Fig. 5. Prevalence of consuming five or more drinks on one occasion in the past 30 days among 16-year-olds in Croatia, 1995–2015



Source: ESPAD 1995–2015 (14).

The results from 2015 showed that the prevalence of reported drunkenness in the past 30 days was 16% for all students (17% of boys and 14% of girls). The proportion of boys and girls who reported having been drunk in the past 30 days was higher than the average among all participating countries (average 13% and 12%, respectively). The 2015 ESPAD data also showed that Croatian students on average reported consuming more alcohol during the last drinking occasion compared to the study average (52 mL and 47 mL of pure alcohol, respectively) (14).

One particular concern regarding alcohol consumption in Croatia is drinking among young people and children. According to the existing survey results, alcohol is easily available to young people (14, 30). Findings from the first ESPAD in 1995 showed that 25% of Croatian students reported having consumed homemade wine at least once in the past 30 days, and 8.6% had consumed homemade spirits at least once in the past 30 days. The results also indicated that alcohol consumption was initiated at an early age; one third of students reported that they had tried beer or wine before the age of 11 years, usually in their own home (31). Young Croatians appear to initially get introduced to alcohol by trying alcoholic beverages at home; however, in later adolescence, drinking is associated with weekends and a group of peers outside the home (30). In 2015, 24% of students reported having purchased beer off-premises in the past 30 days and 21% had purchased wine, which suggests high alcohol availability, as well as poor adherence to the law (32). The most recent ESPAD data from 2015 showed that 64% of Croatian secondary school students had tried an alcoholic beverage before the age of 13 years. Furthermore, 11% had been intoxicated before the age of 13 years, which is higher than the European average (8%). At the age of 16 years, the majority reported having consumed alcohol at least once in their lifetime (14).

In addition to the ESPAD, data on alcohol consumption among school-aged children are also collected in the Health Behaviour in School-aged Children (HBSC) survey. This survey has been conducted in Croatia at four-year intervals since 2002 among students aged 11, 13 and 15 years. According to the HBSC data from 2013/2014, 32% of 15-year-old Croatians had been drunk twice or more in their life (40% of boys and 24% of girls) (33).

Alcohol-related harm in Croatia

Alcohol-attributable mortality

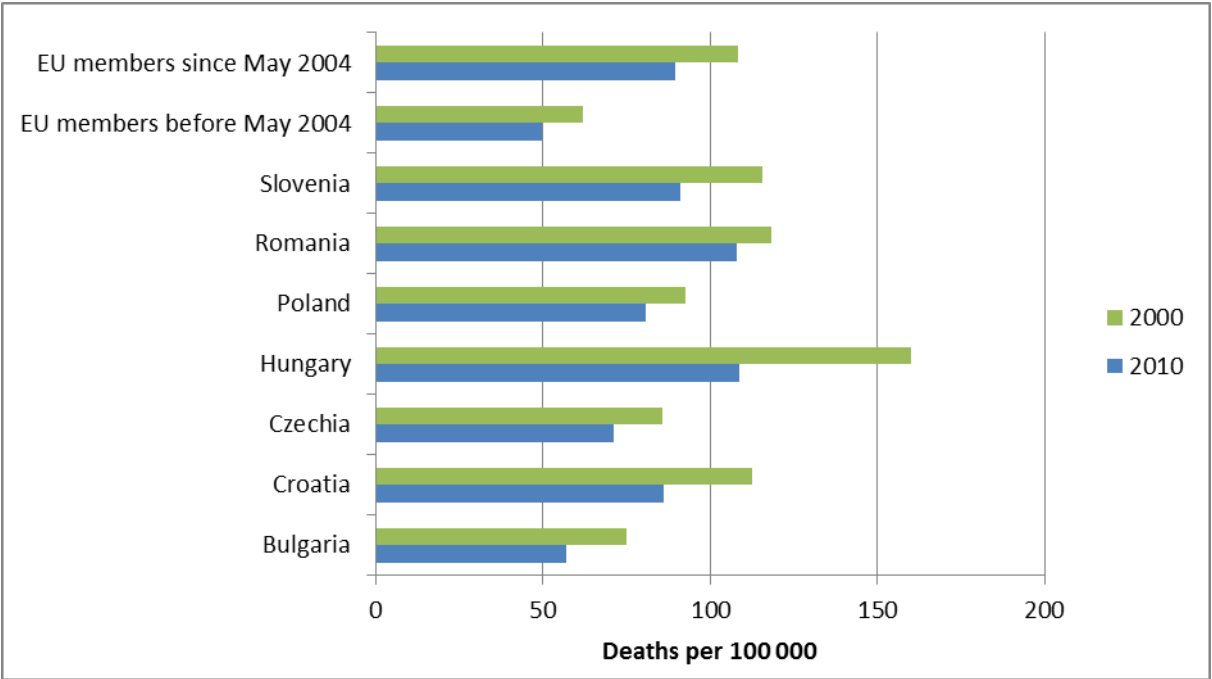
Four disease and injury categories account for most alcohol-attributable deaths, as well as the majority of all-cause mortality, in the European Region: CVD, cancer, injury (intentional and unintentional), and liver cirrhosis. In 2014, the alcohol-attributable standardized mortality rate in Croatia was 112.9 deaths per million for liver cirrhosis, 94.2 per million for cancer, 33.42 per million for CVD, 105.4 per million for all injuries – 64.2 per million for unintentional injury, and 41.2 per million for intentional injury. While Croatia ranks nineteenth in overall alcohol-attributable mortality, the alcohol-attributable rate of cancer is among the 10 highest in the WHO European Region (13).

Croatia has a system for registration and monitoring of alcohol-attributable morbidity and mortality, with regular reporting mechanisms. The Croatian Health Service Yearbook is published annually by the Croatian Institute of Public Health (CIPH), and includes important data on and indicators for the work of the health services within the health system (such as number of beds, treated patients, number of health-care workers), as well as indicators on the health status of the Croatian population and selected population groups. Data are collected from health facilities throughout Croatia, regardless of the type of ownership of the institution or the type of health insurance of individuals. Health indicators provide information on health conditions and enable monitoring of trends, but are also indispensable for the evaluation of the work and efficiency of the health system, and serve as the grounds for health planning at the national and local levels (34).

At the European level, mortality data are available in the European Health for All database (HFA-DB). Fig. 6 shows the alcohol-related mortality (standardized mortality rate per 100 000) in Croatia, other countries within the central-eastern EU, and EU Member States in 2000 and 2010 (25). Comparing data from 2000 and 2010, a decrease in mortality from alcohol-related causes is evident in Croatia, and in other selected countries from the central-eastern EU region.

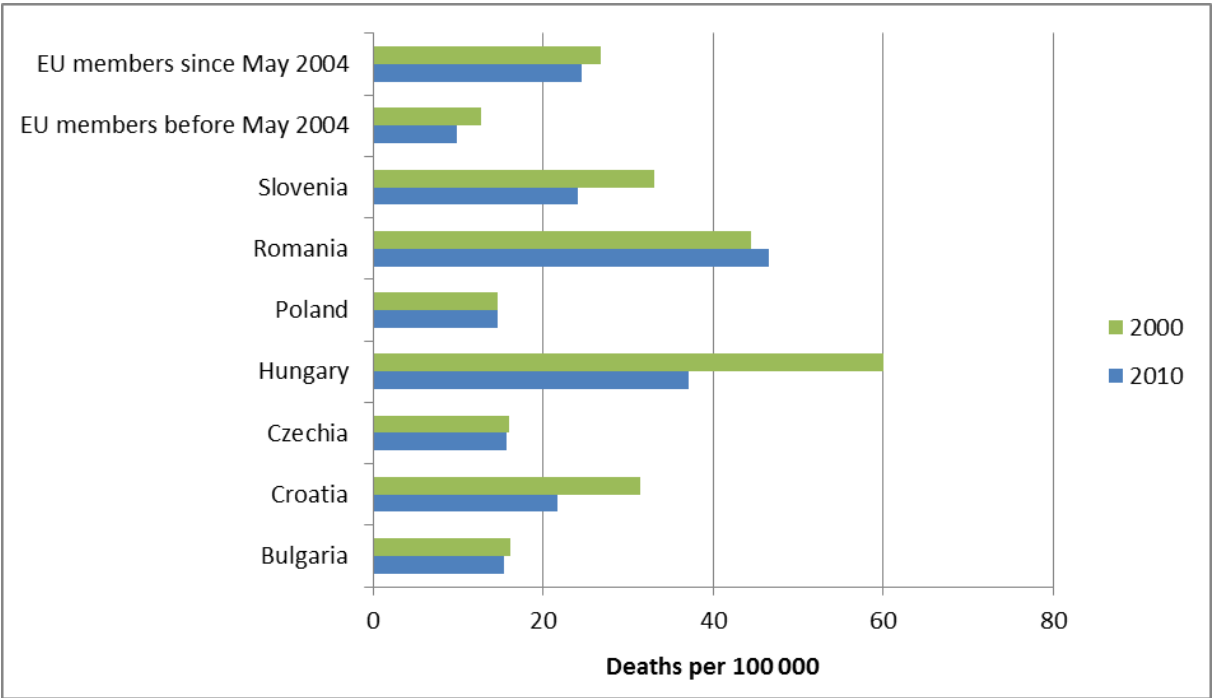
The overall number of deaths due to liver disease (ICD-10 codes K70, K73, K74) in Croatia decreased between 2001 and 2013 (from 1379 cases in 2001 to 982 in 2013) (CIPH/Croatian Bureau of Statistics, unpublished data, 22 December 2016), as well as the number of hospitalizations during the same period (from 4313 cases in 2001 to 3267 in 2013) (Department of Outpatient Specialist Consultative Health Care and Hospital Health Care, CIPH, unpublished data, 22 December 2016). According to data from the HFA-DB, the standardized mortality rate from chronic liver disease and liver cirrhosis in Croatia decreased between 2000 and 2010 (see Fig. 7). A similar trend was noted in all selected central-eastern EU countries, except Romania and Poland (25).

Fig. 6. Age-standardized death rate per 100 000 from selected alcohol-related causes in Croatia, selected central-eastern EU Member States, and the EU in 2000 and 2010



Source: Health for All database (HFA-DB), accessed December 2016 (25).

Fig. 7. Age-standardized death rate per 100 000 for chronic liver disease and cirrhosis in Croatia, selected central-eastern EU countries, and EU Member States, 2000 and 2010

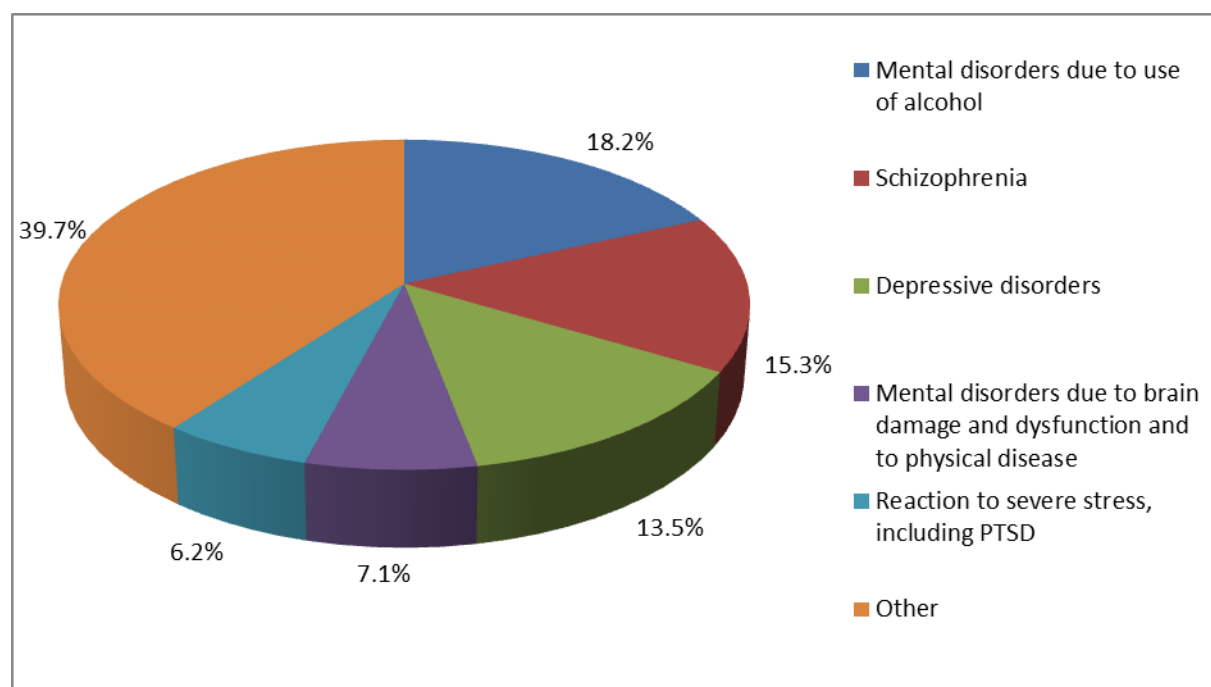


Source: Health for All database (HFA-DB), accessed December 2016 (25).

Alcohol-related hospitalizations due to mental and behavioural disorders

In 2015, mental and behavioural disorders due to the use of alcohol were the second largest cause of all hospitalizations in the group of mental diseases and disorders (*see* Fig. 8). Data available from CIPH indicate that the number of hospitalizations due to mental diseases and disorders caused by the use of alcohol has increased over time; between 2000 and 2014, the number of hospitalizations increased from 7972 to 12 064 (Case Statistical Card. Zagreb: CIPH, unpublished data, 1 December 2015).

Fig. 8. Leading hospitalization diagnoses due to mental disorders, 2015



Source: Croatian Health Service Yearbook 2015, Croatian Institute of Public Health (CIPH) (34). PTSD: post-traumatic stress disorder

Data are available for patients hospitalized in an inpatient facility and in day-care hospitals. The number of hospitalizations in day-care hospitals has been recorded since 2009. An inpatient discharge is the release of a patient who was formally admitted into a hospital for treatment and/or care, and who stayed for a minimum of one night. A day-care discharge is the release of a patient who was formally admitted in a hospital for receiving medical services, and who was discharged on the same day. Table 3 gives data on hospitalizations and day-care admissions for alcohol-related diagnoses (Case Statistical Card. Zagreb: CIPH, unpublished data, 1 December 2015).

Between 2010 and 2014, there were more than 200 hospitalizations related to mental and behavioural disorders due to alcohol use among children and young people (0–18 years) (Table 3).

Table 2. Number of hospitalizations for the most common diagnoses related to mental and behavioural disorders due to the use of alcohol, all ages, 2014

ICD-10 code	Diagnoses	Total number of hospitalizations	Hospitalizations in inpatient hospital wards	Hospitalizations in day-care hospitals
F10.0	Acute intoxication	1738	1618	120
F10.2	Dependence syndrome	8689	4980	3709
F10.8, F10.9	Mental and behavioural disorders due to use of alcohol	573	40	533
F10.3	Withdrawal state	156	98	58
F10.6, F10.7	Psychotic disorders	255	253	2
F10.1, F10.4, F10.5	Other	653	341	312

Source: Case Statistical Card. Zagreb: Croatian Institute of Public Health, unpublished data, 1 December 2015.

Table 3. Number of hospitalizations for mental and behavioural disorders due to the use of alcohol in children aged 0–18 years, 2010–2014

Year	Male	Female	Total (0–18 years)
2010	149	83	232
2011	180	104	284
2012	167	84	251
2013	138	82	220
2014	116	61	177

Source: Case Statistical Card. Zagreb: Croatian Institute of Public Health, unpublished data, 1 December 2015.

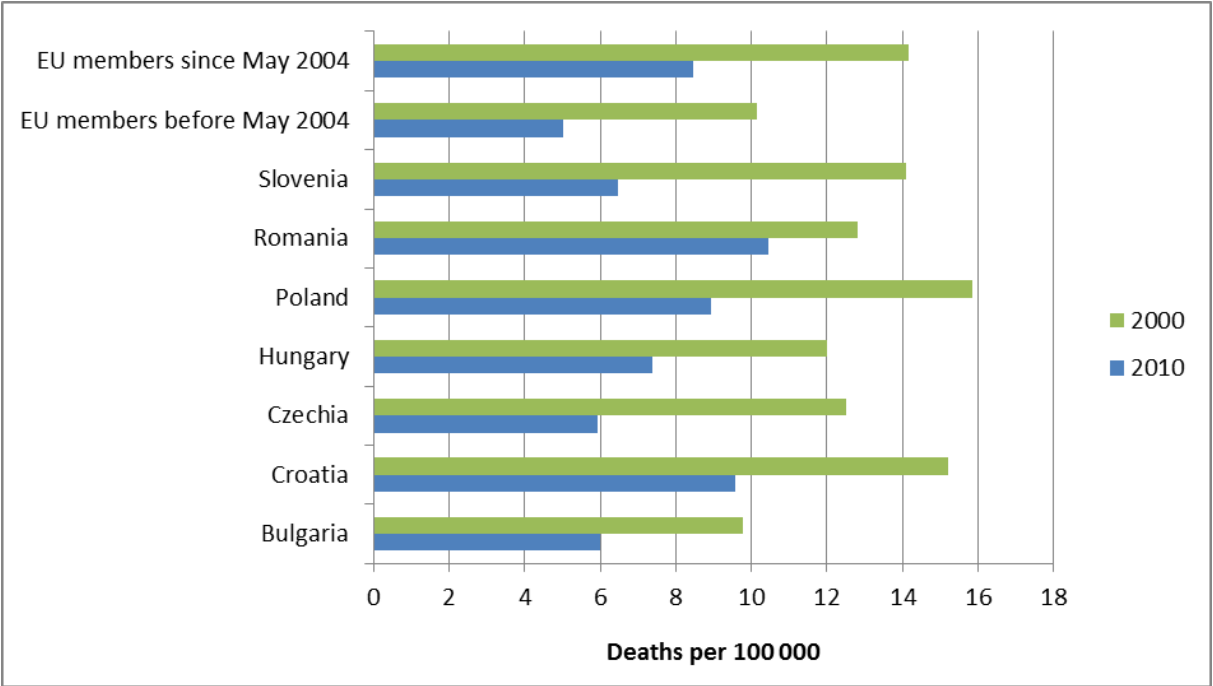
Alcohol-related road crashes and other alcohol-related harm

Alcohol is a significant risk factor for injuries in general, and for road crashes in particular. Compared to other central-eastern EU countries, the age-standardized mortality rate due to road crashes in Croatia is relatively high, despite a decrease over time (*see* Fig. 9). The decrease in road crashes over time is also evident in other central-eastern EU countries, as well as across all EU Member States (25).

According to data from the Ministry of the Interior, regular traffic inspections registered a total of 39 960 drink-driving offences in 2014. Since 2005, the number of drink-driving offences has decreased, but a slight increase is evident from 2010 (*see* Fig. 10). The number of drink-driving road crashes decreased from 7857 in 2005 to 3953 in 2014, corresponding to 12.6% of all road crashes (*see*

Fig. 11). In Croatia, there has been a decrease in the total number of overall road crashes and drink-driving road crashes since 2005, as well as the number of road crashes resulting in injuries or fatalities. However, despite such decreases, in 10.9% of road crashes resulting in injuries, and 19.5% of road crashes resulting in fatalities in 2014, alcohol was a factor (35). The sharper downward trend in overall road crashes compared to drink-driving crashes has resulted in a larger proportion of crashes being caused by drink-driving.

Fig. 9. Age-standardized death rate per 100 000 for road crashes, all ages, in Croatia, central-eastern EU countries, and EU Member States, 2000 and 2010

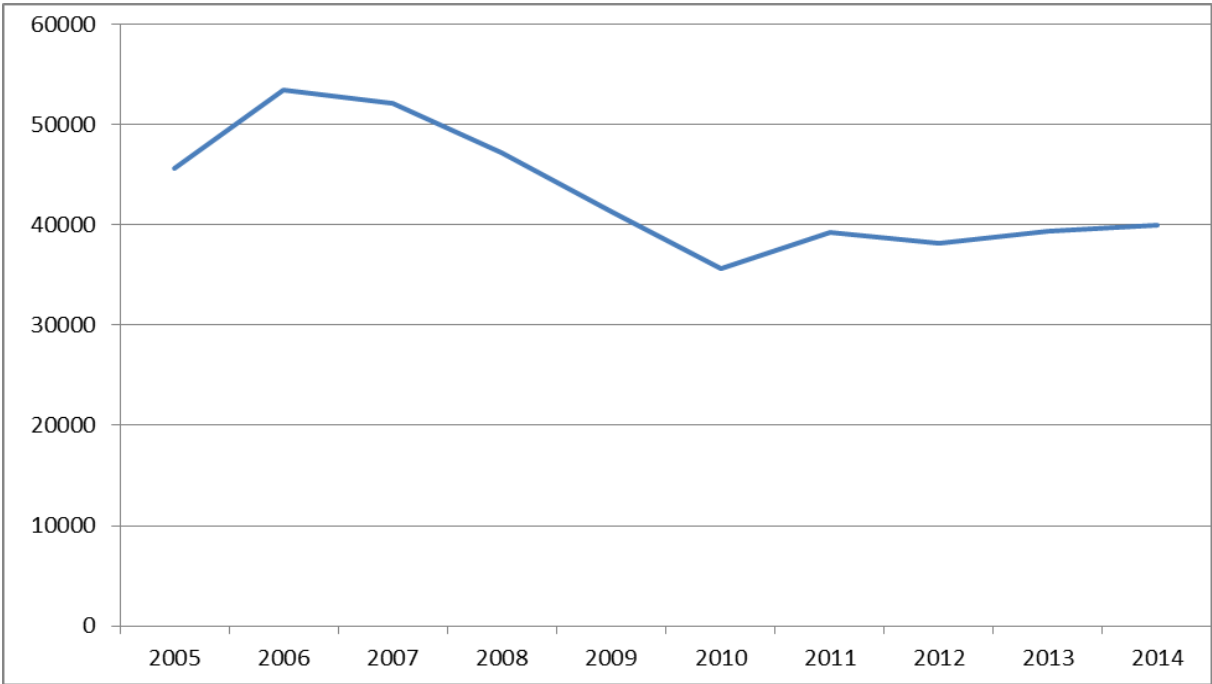


Source: Health for All database (HFA-DB), accessed December 2016 (25).

For young people, the risks and negative consequences of alcohol use are related most often to binge drinking, which is a more common drinking pattern among them than among adults. The ESPAD survey collects information on self-reported negative consequences experienced by students as a result of their alcohol use. Data from 2015 indicate that the most commonly reported consequences include losing or damaging objects or clothing (22%), having a serious argument (16%), and being involved in an accident or getting injured (15%) with prevalence similar for boys and girls (32).

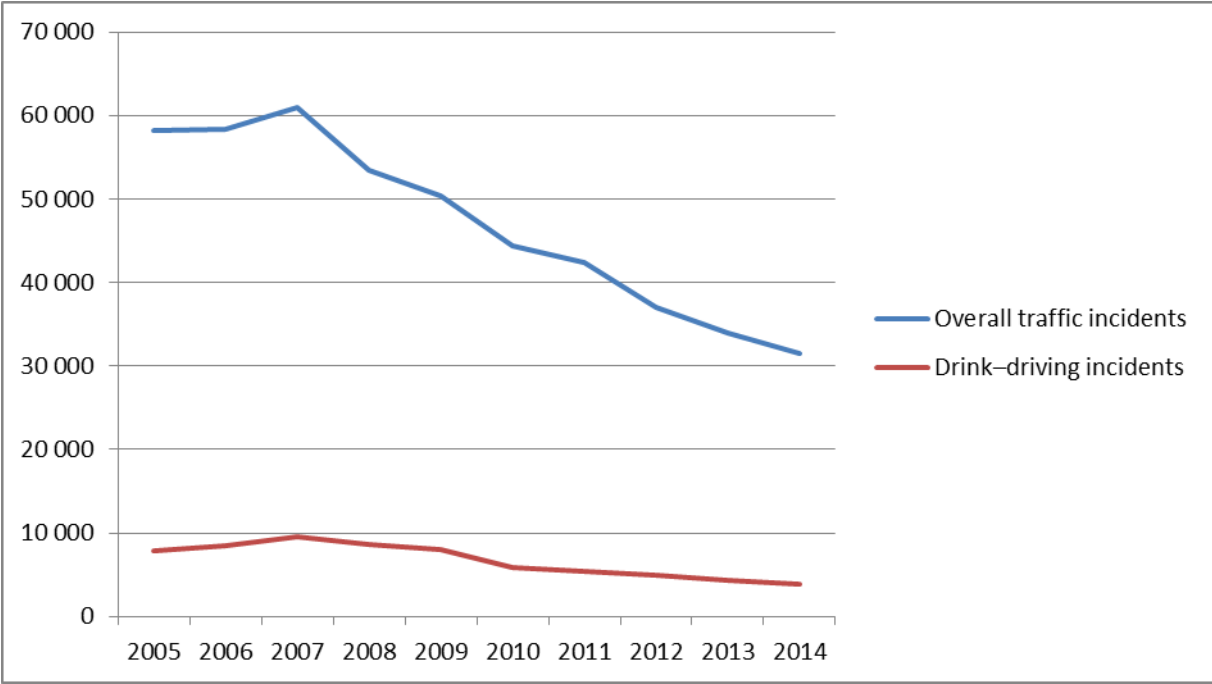
Finally, another important area of harm is the effects of alcohol exposure during pregnancy. There is a lack of comprehensive research on alcohol and pregnancy in Croatia; a review of the literature yielded only two studies conducted in Croatia, in 2010 and 2013 (11,36). Research among schoolchildren in grades one to four in elementary schools in Croatia was conducted in rural and urban areas. These studies showed a prevalence of fetal alcohol syndrome (FAS) of 16.9/1000, prevalence of partial FAS (pFAS) of 49.7/1000, while combined prevalence amounted to 66.7/1000 examined schoolchildren. The estimated prevalence of FAS in urban settings was somewhat lower, at 6.4/1000, pFAS 34.3/1000 and combined prevalence of FAS/pFAS at 40.8/1000 schoolchildren.

Fig. 10. Number of motor vehicle drink-driving offences in Croatia, 2005–2014



Source: Bulletin on Road Safety, Republic of Croatia, Ministry of Interior (35).

Fig. 11. Overall road crashes and drink-driving road crashes in Croatia, 2005–2014



Source: Bulletin on Road Safety, Republic of Croatia, Ministry of Interior (35).

Measures to reduce the harm caused by alcohol in Croatia

Implementing effective alcohol policy measures is a cost-effective strategy to improve the health of the population by reducing the harm caused by the use of alcohol. According to the Organization for Economic Co-operation and Development (OECD), most alcohol policies cover their own implementation costs just by reducing health-care expenditures. Furthermore, based on calculations in three countries (Canada, the Czechia and Germany), OECD found that even the most expensive alcohol policies show favourable cost-effectiveness with respect to health (37).

There is limited information on attitudes towards alcohol and policy measures in Croatia. Survey data collected within the European Joint Action on reducing alcohol-related harm (2014–2016), including a total of 32 000 interviews with a random sample of 18–64 year olds in 20 European countries, showed that between 40% and 50% of respondents were supportive of pricing policies, reduced availability and marketing bans on alcohol. The survey, called the Standardised European Alcohol Survey, was also conducted in Croatia and, once published, these findings will contribute to greater knowledge on Croatians' attitudes towards alcohol policies (38). According to the survey titled Special Eurobarometer of EU citizens' attitudes towards alcohol, conducted in 2007, 52% of respondents considered that the main responsibility for protection against alcohol-related harm lies with the individual, while among Croatian respondents, 70% believed it is the individual's responsibility. In contrast, 28% of Croatian respondents believed that public authorities should intervene in order to protect individuals. The overall findings showed that EU citizens who had not consumed alcohol in the past year were more inclined to empower public authorities to protect citizens from the detrimental consequences of alcohol consumption than those who had consumed alcohol in the past year (52% and 42%, respectively) (28).

Leadership, awareness and commitment

National alcohol policy documents

The WHO *Global strategy to reduce the harmful use of alcohol* (24) was adopted in 2010 at the World Health Assembly. In 2011, the WHO Regional Office for Europe adopted the *European action plan to reduce the harmful use of alcohol 2012–2020*, with 10 action areas that offer a framework for a European alcohol policy (4). In Croatia, a written national strategy for prevention of the harmful use of alcohol and alcohol-related disorders for the period 2011–2016 was adopted in 2010 (39). The national strategy determines priority areas for general action and provides guidance for political decision-making. The strategy also defines measures that can be applied and adapted at all levels, taking into account specific cultural circumstances and public health priorities, as well as available resources and possibilities, all with the goal of enabling activities for preventing the harmful use of alcohol and alcohol-related disorders. The aims of the strategy are as follows:

- raising awareness of the impact of the harmful use of alcohol on health, society and the economy, along with increasing the commitment for action against harmful alcohol consumption;

- continuous research on the determinants of alcohol-related harm and strengthening effective interventions to prevent and decrease the harmful use of alcohol;
- strengthening and building resources for prevention of harmful alcohol consumption, and treatment of diseases and disorders related to alcohol consumption;
- strengthening partnerships and coordination among various sectors and inclusion of all forces to ensure adequate and coordinated action to prevent the harmful use of alcohol; and
- improving systems for monitoring, surveillance, and dissemination and application of information to advocate for the development of policies and evaluation of implementation of the national strategy.

As stated in the national strategy, particular attention must be paid to decreasing harm to persons who drink and to vulnerable populations, including children, adolescents, women of childbearing age, pregnant and breastfeeding women, and socioeconomically disadvantaged groups. The strategy has defined the following areas of action:

- raising awareness and taking on commitments;
- the role of the health system;
- activities in the community;
- driving under the influence of alcohol;
- availability of alcohol;
- marketing alcoholic drinks;
- pricing policies;
- decreasing the negative consequences of alcohol consumption and drunkenness;
- decreasing the influence of illicit and informally produced alcohol on community health; and
- monitoring and surveillance (39).

Establishing collaboration between politicians and health professionals at all levels of the health-care system is important for implementation of the strategy. Different sectors of the government have begun to cooperate more closely on alcohol policy through the establishment of a multisectoral working group for combating the harmful use of alcohol at the Ministry of Health in 2014. The aim of the working group is to make suggestions, provide opinions and proposals related to strategic documents in the area of alcohol and reducing the harmful use of alcohol. The working group consists of experts nominated from the former Ministry of Social Politics and Youth (now Ministry of Demography, Family, Youth and Social Politics); Ministry of Interior; former Ministry of Science, Education and Sport (now Ministry of Science and Education); Ministry of Justice; Ministry of Agriculture; Ministry of Economy; Ministry of Finance; Ministry

of Labour and Pension System; Ministry of Culture; CIPH; Croatian Institute for Health Protection and Safety at Work; University Hospital “Sestre Milosrdnice” – Psychiatry Clinic, the Reference centre of the Ministry of Health for Alcoholism; Croatian Society for Alcoholism and Other Addictions of the Croatian Medical Association; and the Croatian Association of Clubs for Treated Alcoholics.

The Ministry of Health is responsible for following up on national policies, strategies and plans on the harmful use of alcohol. The action plan for the reduction of harmful use of alcohol 2012–2016 was drafted and discussed with professionals from different sectors, as well as within the multisectoral working group. Suggested measures are in line with the national context and available resources.

Involvement of all key stakeholders is necessary for planning, advocacy and implementation of comprehensive policies for reducing alcohol-related harm. A formal link needs to be established among institutions within the health system, government sectors as well as with nongovernment institutions. Systematic strengthening of multidisciplinary models of help is necessary for persons who have problems due to alcohol consumption and for members of their family, particularly through close collaboration between the health and social-care systems.

Guidelines and recommendations

There are no official so-called low-risk drinking guidelines in Croatia. However, recommendations exist as part of nutritional guidelines for adults published in 2002 by the CIPH, Croatian Academy of Medical Sciences, and Centre for Crises Situations. These guidelines define one alcoholic drink as 10 g of pure alcohol and state: “If you drink alcoholic beverages, be very moderate. Sometimes you may take one to two drinks daily, not more than 20 g of pure alcohol for men and not more than 10 g for women. Remember, one drink is equal to 30 mL spirits, 125 mL wine, or 25 mL beer, and contains 10 g of alcohol” (40). In addition, different recommendations are available on the website of the Croatian Association for Treated Alcoholics. A standard drink is said to contain about 14 g of pure alcohol, and it is also stated that “periodic alcohol consumption for adults of one to two drinks per day for men and one drink a day for women does not leave direct toxic effects on health” (41). These guidelines also recommend that older people limit their alcohol consumption to one drink per day and discourage drinking alcohol during pregnancy, as any amount of alcohol can have a negative effect on fetal development (42).

Croatian health professionals often use the European Guidelines on CVD prevention in clinical practice (version 2012), which state that drinkers should limit their alcohol intake to a maximum of one glass per day for women (10 g of pure alcohol) or two glasses per day for men (20 g of pure alcohol) to minimize the risk of chronic disease (43).

In future, it is necessary to raise awareness among health professionals on new knowledge related to alcohol consumption but, in addition, it is necessary to inform the general public through providing consistent, evidence-based public health messages.

Health services' response

Screening and brief interventions for hazardous and harmful drinking

According to the OECD *Policy Brief – tackling harmful alcohol use*, alcohol policy should primarily target heavy drinkers, for which the role of primary health-care physicians is of great importance (37). In Croatia, the Cut down, Annoyed, Guilt, Eye-opener (CAGE) and the Alcohol Use Disorder Identification Test (AUDIT) screening questionnaires are used in primary care and hospital settings (in- and outpatient care). However, the use of these screening tools is not obligatory but voluntary (44,45). Furthermore, interviews on risk behaviours are part of regular check-ups in school and adolescent health services in public health institutes for first-year university students, and include questions regarding the frequency and pattern of alcohol consumption (47). Guidance for health professionals states that for evaluation of alcohol consumption, physicians could be helped by the use of laboratory estimation of gamma-glutamyl transferase, carbohydrate-deficient transferrin, mean corpuscular volume, uric acid, aspartate aminotransferase, alanine aminotransferase, and triglycerides (45).

In general and family practice, provision of additional services through preventive examinations is available and financed by the Croatian Health Insurance Fund for general/family medicine. Health check-ups are an opportunity to prevent and record risk behaviours as well as complications of newly diagnosed chronic diseases. In order to implement these preventive examinations, prevention panels are used, among which there is a panel devoted to the prevention of excessive alcohol consumption. For patients 14 years of age and older, the assessment includes four indicators (consumption in the past year, frequency of consumption, most commonly consumed alcoholic beverage, and weekly amount of alcoholic beverages consumed) (47). At the end of the screening, depending on the result, a short, structured education session is provided on the consequences of excessive alcohol consumption and a leaflet with further information (47, 48).

In future, routine assessment of patients' alcohol consumption should be encouraged among primary health-care physicians through screening and brief intervention programmes. Ensuring that health-care staff is sufficiently trained in this area is therefore an important objective.

Treatment services for alcohol use disorders in the health system

The most important contribution of Croatia to European and world alcoholology represents a public health approach to this issue developed by Hudolin and his associates, which is accepted in some European countries as well (49,50). Treatment of alcohol use and rehabilitation was implemented in Croatia in 1964 on the principles of the Zagreb Alcoholology School. An alcohol-dependent person, together with their family, is introduced to treatment and rehabilitation with the aim of achieving abstinence, as well as rehabilitation and stabilization of the entire family. Treatment is initiated in one of the institutional treatment programmes, whether as an in- or outpatient, after which long-term rehabilitation is continued in one of the treated alcoholics' clubs (TACs). These are self-help groups organized as civic associations, which are united to provide a network of support in treating alcoholism, and are supported by trained professionals (49,50). It is estimated that around 2500 people per year actively engage with the TACs in Croatia (personal communication, 17 March 2017).

Community actions and campaigns

Population-based approaches are an important tool for reducing the effects of harmful use of alcohol in family, social and work settings. At the local level in Croatia, a range of actions have been undertaken. For example, in some local communities, such as the City of Zagreb, action plans have been developed (51).

The OCDA has developed a comprehensive Internet platform⁴ for prevention, treatment and harm reduction programmes within communities. This includes projects aimed at promoting programmes for the prevention of addiction to drugs, but also alcohol and gambling, primarily aimed at children and youth in schools and in the community. According to the Law on Games of Chance (52), the Ministry of Health assigns funds to support national institutions and nongovernmental organizations (NGOs) for addiction prevention and harm reduction projects.

Various NGOs, for example, Mali Plac, which is a member of Eurocare (European Alcohol Policy Alliance), have shown an interest in addressing the increasing problem of alcohol consumption among young people. Supported by the Ministry of Science and Education, community-level projects have been implemented to prevent alcohol consumption among minors through supporting peer education, structuring leisure time activities, encouraging sports activities, and building life skills from an early age.

Substance abuse prevention includes prevention of tobacco, alcohol and drug use. In Croatia, the system of addiction prevention in those who experiment with, consume or are addicted to drugs includes, among others, services for mental health, addiction prevention and outpatient treatment within county institutes of public health. Prevention interventions are conducted through a series of measures in the schooling system as part of the school programme, as well as the health education curriculum. Especially prominent in the work with at-risk children and youth are school medicine services and services for mental health, addiction prevention and outpatient treatment within county institutes of public health through counselling and activities aimed at youth with risk behaviours, including specific measures of early intervention for young experimenters. Social welfare centres cooperate with the prevention system as well as local family centres, which are part of the social welfare system (53).

National mass media campaigns have been conducted on specific topics such as binge drinking, drink-driving and selling alcohol to minors. According to the Trade Act, the minimum legal age for purchase of an alcoholic drink (defined as any drink containing alcohol) in Croatia is 18 years (16). Data from previous surveys have shown that alcoholic beverages are readily available. There is thus a need to raise awareness of the importance of preventing the sale of alcohol to, and consumption of alcohol by, underage drinkers, and supporting alcohol-free environments and events, especially for youth and other at-risk groups. A national campaign for prevention of sales and serving of alcohol to persons under the age of 18 years was launched in 2015, entitled “Turn on your conscience – sometimes you need to say NO to children”. The campaign called for consistent implementation of the law banning the serving and selling of alcoholic beverages to persons under the age of 18 years (54). Other campaigns include “Think about it – when you drink, don’t drive” (56) and “Think about it – you must know when to stop” (56). For the fifth

⁴ <http://www.programi.uredzadroge.hr/>

time in Croatia, an international educational and preventive action campaign ran in 2016, called “European night without accident” (57).

Several of the campaigns organized in Croatia were developed in cooperation with economic operators. It should be noted that the involvement of the alcohol industry in such campaigns is a source of considerable controversy in other countries, due to concerns that economic outcomes may precede public health (58). WHO has stated that “public health policies concerning alcohol need to be formulated by public health interests, without interference from commercial interests” (59).

As part of the health education curriculum in Croatian schools, one module called addiction prevention includes the topic of alcohol-related harm (60).

Croatia participated in the project co-funded within the Second EU Health Programme by the EU; “Joint Action on reducing alcohol related harm”. This aimed to provide support to EU Member States in taking forward the work on common priorities, in line with the Commission of the European Communities EU strategy to support Member States in reducing alcohol-related harm from 2006 to 2012 in order to strengthen the capacity of Member States to address and reduce alcohol-related harm (61). The Joint Action also aimed to strengthen the knowledge base through improving access to comparable data on drinking levels, drinking patterns and alcohol-related harm, while fostering the use of common cost-effective approaches to inform and raise awareness on these issues (62).

Croatia also took part in the European Workplace and Alcohol Project, another project co-financed by the European Commission during the period 2011–2013. The primary goal of this project was to develop effective methods of engaging workplaces and their employees in order to raise awareness and cause change at the level of individuals and organizations, thus leading to safer alcohol consumption and reductions in alcohol-related absence at work, presenteeism (poor performance at work) and injuries. Guidelines were prepared on interventions related to alcohol in the workplace environment (63).

Measures to decrease work-related stress need to be strengthened, and workplace interventions made available on demand, such as psychosocial skills training for employees, short-term counselling and programmes providing information on alcohol.

Drink–driving policies and countermeasures

Consuming alcohol has an impact on the central nervous system and impairs functions such as reaction time, which increases the risk of being involved in a road crash when driving under the influence of alcohol. The ability to drive is affected by even small amounts of alcohol. Having a legal limit of blood alcohol concentration (BAC) for driving is therefore an important policy measure (4). Police enforcement of such a law is important to decrease traffic casualties caused by drink–driving. In Croatia, the legal BAC limit, as stated in the Law on Road Traffic Safety, is 0.05% for the general population, and 0.00% for young drivers (under 24 years of age) and professional drivers. According to the law, a police officer who investigates a road crash resulting in property damage will obtain a sample from drivers involved in the road crash with the help of

appropriate means and instruments, in order to determine the presence of alcohol, medications or illicit drugs that affect the ability to drive (64).

Availability of alcohol

The national legal minimum age for on- and off-premise sales of alcoholic beverages (beer, wine and spirits) in Croatia is 18 years (17). Regulations regarding hours of sale of alcoholic beverages, density of on- and off-premise alcohol outlets, and the days on which the sale of alcoholic beverages is allowed have not been introduced at the national level. The Hospitality and Catering Industry Act grants permission to a representative body of the local authority to ban the serving of alcohol in hospitality or catering facilities at particular periods of the day (17).

For the purposes of the Act on the Prevention of Disorder at Sports Competitions (18), the following shall be deemed unlawful behaviour: possession or consumption of alcoholic beverages and other beverages that contain more than 6% of alcohol; introduction of alcoholic beverages into sports facilities; attempt to enter, arrive and stay in the area of a sports facility intoxicated above 0.50 g per kg; or the appropriate amount of mg/L of exhaled air. Stewards shall prohibit access to sports facilities of a person intoxicated above 0.50 g per kg, or the appropriate amount of mg/L of exhaled air or a person who attempts to introduce alcoholic beverages in sports facilities. In addition, sale and distribution of alcoholic beverages shall not be allowed in the area where sports are held. With prior consent of the police, national sports federations can be allowed to sell and distribute beverages with an alcohol concentration of up to 6%, in open paper or plastic containers, in sports facilities and sporting competitions that are not considered high-risk events.

Pricing policies

Within Croatia, an excise duty law on alcohol is in force (19). However, excise duties on alcohol are not adjusted regularly in relation to the level of inflation and income (65). People who produce strong alcoholic drinks for personal use in an amount not exceeding 20 L of pure alcohol per household per year must be entered into a register of excise duty payers, according to the Law on Excise Duty (19). The system of taxation of excise products, among which alcohol and alcoholic beverages are included, is in line with EU legislation.

Marketing and labelling of alcoholic beverages

Croatia has legally binding regulations on alcohol advertising and sales promotion. In accordance with the Electronic Media Act (66), restrictions regarding the provision of audiovisual commercial communication are as follows:

- audiovisual commercial communications on alcoholic beverages shall not be aimed specifically at minors and shall not encourage excessive consumption of such beverages;
- advertising and teleshopping of alcohol and alcoholic beverages shall not be aimed specifically at minors or, in particular, depict minors consuming these beverages;
- consumption of alcohol shall not link to enhanced physical performance or to driving;
- the use of alcohol should not be suggested to increase social or sexual success;

- advertisements shall not suggest that alcohol has therapeutic qualities or that it is a stimulant, a sedative or a means of resolving personal conflicts;
- immoderate consumption of alcohol shall not be encouraged and abstinence or moderation shall not be presented in a negative manner; and
- emphasis shall not be placed on high alcoholic content being a positive quality of the beverages (66).

In the Ordinance on Advertising of Wine with Controlled Geographical Origin and Fruit Wine (67), the advertising of wine and fruit wine through the press, radio and television, in electronic publications, teletext and other forms of daily and periodical advertising by transmitting voice, sound or picture recordings is allowed in such a manner that it is available to the public. The advertising message shall not appear on health and educational facilities; on signs that are within 300 m of kindergartens and schools, as well as in performances, the press, publications and on TV shows aimed primarily at minors.

Health warning labels on alcohol advertisements or containers are not legally required.

Conclusions: a long way to go despite improvements

In the past five years, following the adoption of the national alcohol strategy, several activities have been implemented in Croatia to reduce the harmful use of alcohol. These include the drafting of an alcohol action plan, the formation of a multisectoral working group on alcohol, and health education and prevention programmes in the education system. These activities have been added to already established prevention strategies such as drink–driving legislation and campaigns, TACs, and health promotion in schools. Despite these efforts, there is a need to implement further actions to reduce the harmful use of alcohol in Croatia. Recent data have indicated that APC in the adult population has decreased in Croatia, from around 16 L of pure alcohol per person per year in 1990 to approximately 12 L per person per year in 2014. However, consumption in Croatia has been, and remains, higher than the average in the WHO European Region. The burden of alcohol-attributable harm is particularly evident in cancers, where the rate of alcohol-attributable cancer is 94.2 per million, making Croatia one of the 10 countries with the highest rates in the Region (13).

A comprehensive alcohol strategy was adopted in 2010, which covered the period 2011–2016, and an action plan has been drafted, but not yet adopted and implemented. A strategy for the upcoming period and a national action plan would help to counter the harms related to alcohol use, as would the establishment of some form of a high-level and independent body or council. National guidelines and plans on prevention, screening and community actions in reducing alcohol-related harm would help improve implementation of measures at the multisectoral level. Strong political will is needed to ensure the availability of resources for better enforcement of laws that help in tackling the harms related to alcohol and in building agreement with the industry and hospitality sector in order to develop responsible business practices regarding the selling, serving or marketing of alcoholic beverages. Strict regulations regarding discount sales, sales

below cost and flat rates for unlimited drinking or other types of volume sales would protect young people who are especially price sensitive.

Considering the high consumption levels in Croatia, despite a decline over time (13), further policy measures need to be implemented to tackle alcohol-related harm. As recommended by WHO and the World Economic Forum, focusing on the “best buys” for alcohol policy (increasing price, reducing availability and restricting marketing) should be considered a priority for alcohol policy in Croatia (68,69). In order to empower health professionals to implement effective interventions to reduce the harmful use of and prevent disease caused by alcohol, greater capacity-building is needed. This requires (1) provision of training for screening and brief interventions for hazardous and harmful use of alcohol, and (2) national guidelines on alcohol consumption and associated risks, to ensure a consistent public health message regarding alcohol consumption. Along with such actions, national information campaigns should be developed, launched and evaluated to assess the impact of information on the knowledge and behaviours of the public.

Another important area in need of strengthening is the capacity for monitoring alcohol indicators and conducting alcohol research projects at the national level. For this purpose, alcohol research projects should be funded with public financial resources, and monitoring systems enhanced by introducing comprehensive reports on alcohol on an annual basis, following up on nationally agreed indicators.

Finally, an important area for improvement in reducing alcohol-related harm is focusing on consumption among young people. Recent data have indicated that consumption appears to be decreasing among adolescents; however, the proportion of students who drink and who consumed five drinks or more on one occasion in the past 30 days has increased steadily over the past decade. Furthermore, the perceived availability among adolescents is high, as most students believe it is fairly easy or easy to obtain alcohol (14). This calls for more comprehensive and multisectoral support, focusing on:

- establishing an environment where availability and affordability are clearly limited;
- creating an atmosphere in society in which alcohol use among young people (minors) is not tolerated or considered common behaviour;
- implementing a “whole-school” approach to health promotion activities in schools, from kindergarten to university, with school staff, students and parents involved in deciding on school policy development, school environment and interventions; and
- ensuring that school interventions on the prevention of alcohol use are integrated with community actions.

When discussing actions for reducing alcohol-related harm among young people, other related risk behaviours should be also considered.

In conclusion, alcohol use is still a public health concern in Croatia, despite the reduction in consumption. Although several policy measures have been implemented over the past couple of years, further strengthening of policy is needed in order to reduce consumption and the degree of harm in the country.

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