

MAKING THE WHO EUROPEAN REGION



DEVELOPMENTS IN ALCOHOL CONTROL POLICIES, 2010–2019

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Abstract

This report presents the current status of alcohol consumption, alcohol-attributable harms and the implementation of alcohol control policies in the WHO European Region, using available data from 2010, 2016 and 2019. A detailed overview is provided of the implementation of alcohol policies described in the 10 action areas of the European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020 (EAPA), including the current status of implementation of the five action areas of the WHO-led SAFER initiative: (1) **S**trengthen restrictions on alcohol availability; (2) **A**dvance and enforce drink–driving countermeasures; (3) **F**acilitate access to screening, brief interventions and treatment; (4) **E**nforce bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion; and (5) **R**aise prices on alcohol through excise taxes and pricing policies. Finally, the report analyses progress in policy implementation in the period 2016–2019, using the WHO alcohol policy composite indicators, which were developed to measure alcohol policy implementation in the 10 EAPA action areas.

Keywords

ALCOHOL DRINKING – ADVERSE EFFECTS ALCOHOL DRINKING – PREVENTION AND CONTROL ALCOHOL-RELATED DISORDERS – PREVENTION AND CONTROL ALCOHOL POLICY HARM REDUCTION HEALTH POLICY RISK FACTORS EUROPE

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Contents

Foreword	vi
Acknowledgements	vii
Abbreviations	vii
Executive summary	viii

1.	Introd	uction	1
2.	Source	s of data and methods	3
3.	Alcoho	l use in the WHO European Region	4
	3.1 Dri	nking status and average alcohol per capita consumption in 2016	4
	3.2 Cha	anges in drinking status and APC between 2010 and 2016	8
	3.3 Hea	avy episodic drinking in 2016	11
	3.4 Cha	anges in HED and drinking prevalence between 2010 and 2016	11
4.	Burde	n of mortality and morbidity in the WHO European Region	12
	4.1 Pro	portion of the disease burden attributable to alcohol in the WHO European Region	12
	4.2 Alc	phol-attributable burden of disease in younger age groups and changes between 2010 and 2016	14
	4.3 Dis	tribution of alcohol-attributable mortality by specific causes of death	16
	4.4 Reg	ional distribution and changes in alcohol-attributable burden of disease between 2010 and 2016	17
5.	Making	g the WHO European Region SAFER	20
	5.1 Lev	els of implementation of SAFER policies in the WHO European Region	20
	5.1	1 Strengthen restrictions on alcohol availability	21
	5.1	2 Advance and enforce drink–driving countermeasures	24
	5.1. 5.1	 Facilitate access to screening, brief interventions and treatment Enforce haps or comprehensive restrictions on alcohol advertising, sponsorship and promotion 	26
	5.1	 Raise prices on alcohol through excise taxes and pricing policies 	31
	5.2 A c	ritical mass – implementing a comprehensive approach	32
	5.2	1 Leadership, awareness and commitment	32
	5.2	2 Informal and illicit alcohol	34
	5.2	3 Monitoring and surveillance	35
	5.2	 Keducing the negative consequences of drinking and acconot intoxication Community action 	36 38
6.	Chang	es in alcohol policy implementation in the WHO European Region (2016–2019)	40
	6.1 Ove	rview of alcohol policy implementation in 2016	40
	6.2 Par	tial 2019 update of alcohol policy implementation	42
7.	Conclu	sions: making the WHO European Region SAFER	43

References	4	•6

Annex 1. Composition of total alcohol per capita consumption (15+ years) by country, 2010 and 2016 50

Foreword

The COVID-19 pandemic has drawn attention to the critical role of public health in highlighting and addressing inequities that lead to greater vulnerabilities and differences in health behaviours and outcomes within and between populations. The WHO European Programme of Work, adopted on 14 September 2020 by the Ministers of Health of the 53 countries of the WHO European Region, reflects their joint determination to strengthen the leadership of health authorities in the Region and to ensure that no one is left behind.

Like COVID-19, alcohol harm hits the most vulnerable hardest and exacerbates existing health inequalities; evidence shows that similar levels of alcohol consumption are associated with a more damaging impact on the health of more deprived individuals. Alcohol consumption and the burden of disease it brings present some of the greatest health and societal challenges faced by the WHO European Region. Alcohol has been identified as a causal factor for more than 200 diseases, health conditions and injuries. Globally, the WHO European Region has the highest level of alcohol per capita consumption and the highest proportion of drinkers. One in every 10 deaths in the Region each year is caused by alcohol, amounting to almost 1 million in total, and many of these deaths occur at a very young age.

Alcohol is no ordinary commodity and should not be treated as one. To improve the health of all people in the WHO European Region, leaving no one behind, we need a reinvigorated commitment to reduce alcohol consumption and alcohol-attributable harm. Evidence to support effective and cost-effective policies is growing, including documenting the impact of alcohol control policies on all-cause mortality and life expectancy in the countries of the Region. The overall message is that progress is very uneven: while the evidence shows that drinking levels have remained largely unchanged in the Member States of the European Union, we have seen significant declines in levels of alcohol consumption and alcoholattributable harm in the eastern part of the WHO European Region. Where progress has been made, it has occurred against a background of a series of effective and evidence-based alcohol control policies implemented over a prolonged period of time.

A SAFER European Region can only be achieved through a significant reduction in alcohol-attributable harm and the implementation of the most effective and cost-effective interventions. The WHO-led SAFER initiative focuses on five priority areas supporting action for effective alcohol policy responses, as evidenced in the WHO Global Strategy to Reduce the Harmful Use of Alcohol, the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases, and the European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020. Drawing on data from the period 2010–2019, this report provides summary evidence of progress made in the SAFER action areas, shedding light on effective implementation of alcohol policies across different sectors. This review provides important evidence to build on the progress that has been made to date. More efforts to implement the SAFER action package, especially the WHO "best buys", will bring benefits for the health of the WHO European Region's population and for its future development. The WHO Regional Office for Europe will continue to prioritize country efforts to advance alcohol policy, providing technical assistance and facilitating discussions at the interface between the health and socioeconomic spheres. In doing this, we will encourage countries to implement SAFER interventions at the country level and to monitor their progress, aiming to create a SAFER European Region for all generations.

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Abbreviations

APC	alcohol per capita consumption
BAC	blood alcohol concentration
CIS	Commonwealth of Independent States
CVD	cardiovascular disease
DALY	disability-adjusted life year
EAPA	European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020
HED	heavy episodic drinking
LMICs	low- and middle-income countries
NCD	noncommunicable disease
YLD	year lived with disability
YLL	year of life lost



Executive summary

This report, *Making the WHO European Region SAFER*, provides a brief overview of the current status of the alcohol-attributable burden of disease in the WHO European Region and of the changes in alcohol consumption between 2010 and 2016. The report then analyses the implementation of alcohol control policies in all 10 action areas of the European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020 (EAPA) and focuses, in particular, on the five high-impact strategies of action of the WHO-led SAFER initiative: (1) **S**trengthen restrictions on alcohol availability; (2) **A**dvance and enforce drink-driving countermeasures; (3) **F**acilitate access to screening, brief interventions and treatment; (4) **E**nforce bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion; and (5) **R**aise prices on alcohol through excise taxes and pricing policies. In addition, the report provides a snapshot of the EAPA composite policy indicators for the year 2019, revealing that overall, between 2016 and 2019, almost no progress was made in the WHO European Region towards implementing evidence-based and effective alcohol control measures.

Although this report documents overall decreases in levels of alcohol per capita consumption as the key indicator for harm in the WHO European Region, these improvements were observed only in certain countries, mainly in the eastern part of the Region, where the level of alcohol-attributable harms remains very high. Existing projections suggest that overall alcohol consumption in the Region is set to remain close to current levels over the next 10 years, although it is likely that the global COVID-19 pandemic has led to an overall decrease in alcohol use, at least in the general population (Manthey et al., 2020; Rehm et al., 2020).

Key messages

- On average, adult alcohol per capita consumption (calculated only for people aged 15 years and over) in the WHO European Region declined by 12.5% from 11.2 litres in 2010 to 9.8 litres in 2016. However, differences between countries were large and levels of consumption remained higher than in any other WHO region worldwide.
- Between 2010 and 2016, of the 51 Member States of the Region that reported data, 34 countries saw decreases in their alcohol consumption and 17 saw increases. Of the 34 countries that reported decreases, 16 decreased their alcohol consumption by at least 10% between 2010 and 2016, meaning that they had already reached the global noncommunicable disease (NCD) alcohol-related target.

- Prevalence of heavy episodic drinking (HED), defined as an intake of 60 g or more of pure alcohol on at least one occasion over the previous 30 days, declined by 16.3%, on average, between 2010 and 2016. However, in 2016 two out of five adult men (40.5%) engaged in HED, thereby putting themselves at risk of short- and long-term health and social problems.
- Alcohol-attributable mortality (i.e. deaths that would not have occurred in the absence of alcohol use), as a proportion of all-cause mortality, was exceptionally high in the WHO European Region. Although alcohol-attributable deaths decreased overall after 2010, one in 10 adult deaths in the Region (in absolute numbers, almost 1 million deaths) was attributable to alcohol consumption.
- The great majority of alcohol-attributable deaths (78.5%) in 2016 occurred because of NCDs, while the rest were due to injury (17.4%) and communicable and other diseases (4.1%).
- On average, about 2545 adults died because of alcohol every day in the WHO European Region in 2016, and one in every eight years of life lost was due to alcohol.
- The damaging impact of alcohol starts early in the life course and a large proportion of mortality among young people (15–24-year-olds) is alcohol-attributable. Around 15.6% of all-cause mortality among 15–19-year-olds was alcohol-attributable, while for 20–24-year-olds the figure was even higher, at 23.3%. This means that a substantial proportion of deaths among young adults in 2016 occurred because of alcohol (even though substantial improvements had been made since 2010).
- In 2016 more than 30 million disability-adjusted life years (DALYs) in the Region were alcohol-attributable – more than 30 million healthy years of life were lost to alcohol consumption. However, the number had substantially decreased from almost 40 million in 2010.
- Both alcohol-attributable deaths and DALYs declined strongly between 2010 and 2016. The age-standardized alcohol-attributable deaths (from all causes) per 100 000 decreased by 25.3%; for DALYs, the same indicator dropped by 23.3%, which was the largest proportional decrease worldwide.
- The largest proportions of alcohol-attributable mortality were observed in eastern European countries. However, these were also the countries with the largest relative reductions in alcohol-attributable mortality and alcohol consumption between 2010 and 2016.

- When measured with the WHO alcohol policy scoring tool and its 10 EAPA composite policy indicators, the average implementation rate for all 10 alcohol policy areas across the whole WHO European Region was only 55%.
- Of the 10 EAPA action areas, only three areas achieved relatively high implementation scores in 2016: (1) drink-driving countermeasures (80%); (2) leadership, awareness and commitment (75%); and (3) actions to tackle unrecorded (informal or illicit) alcohol (66%). Other areas received moderate or low scores (17–64%).
- Pricing policies despite being the most cost-effective type of policy, recognized as a "best buy" measure to reduce the disease burden, and part of the WHO SAFER package were the worst-performing policy area in the Region (17%) in 2016. Even worse, the available data suggest that alcohol had become *more* affordable in the Region as a whole because of Member States' failure to adjust alcohol taxes for inflation.
- Of the five SAFER areas, only drink-driving countermeasures were sufficiently implemented across the Region in 2016 (80%), while health service responses (provision of screening and brief interventions) (45%) and pricing measures (17%) were poorly implemented.
- Higher policy implementation rates were observed in northern and eastern countries of the Region, thereby corroborating emerging evidence of the progress made by eastern European countries in implementing alcohol control policies and reducing the alcohol-attributable burden of disease.
- A snapshot of the EAPA composite policy indicators for the year 2019, based on a WHO-developed policy scoring tool, indicated that almost no progress had been made between 2016 and 2019 in the implementation of alcohol control measures.
- Overall comparisons of trends in alcohol consumption, alcohol-attributable burden of disease and policy response suggest that, while eastern European countries may have experienced a greater "harm per litre" of alcohol, many of them substantially reduced alcohol consumption and the alcohol-attributable burden of disease between 2010 and 2016, through implementation of evidence-based alcohol policies such as those highlighted in the SAFER package.
- Disruption of social life, work rhythms and environments in the COVID-19 era, coupled with the digital transformation of everyday life, poses specific challenges to policy- and decision-makers and public health stakeholders. More decisive action is needed to reduce alcohol intake as a modifiable risk factor and alcohol-attributable harms as a completely preventable component of the disease burden.

1. Introduction

Although the WHO European Region is globally the region with the highest levels of drinking and the highest proportion of people who consume alcohol, it is also the only region where alcohol consumption has decreased in the past 10 years (WHO. 2018a). However, the overall reduction in drinking levels in the WHO European Region has been achieved mainly by substantial reductions in drinking in certain Member States, mainly in the eastern part of the Region, while drinking levels elsewhere have largely stagnated or even increased (Berdzuli et al., 2020; Probst et al., 2020; Rehm et al., 2019b). A detailed analysis shows that this reduction has been possible in part because a number of countries that previously had some of the highest levels of drinking and alcohol-attributable burdens of disease worldwide have introduced comprehensive policy measures to reduce alcohol consumption at the population level and also implemented strategies directed at high-risk populations; these include provision of screening and brief interventions and treatment for alcohol use disorders to reduce the alcohol-attributable harm in people who are already experiencing the consequences of their alcohol use (Grigoriev & Bobrova, 2020; Neufeld et al., 2020a and 2020b; WHO, 2019b). This pattern of falling consumption and strengthened policy response highlights that trends in alcohol use and alcohol-attributable morbidity and mortality are not arbitrary and can be shaped by decisive action.

Guidance and support in implementing policies to reduce morbidity and mortality due to alcohol consumption and its wider social consequences were endorsed by the 53 Member States of the WHO European Region in the European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020 (EAPA) (WHO, 2012). This report, which is based on data collected for the WHO *Global status report on alcohol and health 2018* (WHO, 2018a), is intended to provide a detailed summary assessment of trends in alcohol consumption and in the alcohol-attributable burden of disease and policy developments in the WHO European Region for the period 2010–2016.

The WHO Regional Office for Europe supports Member States in the implementation, evaluation and monitoring of alcohol policies, according to their needs, culture and socioeconomic contexts. This report is meant to supplement other sources of information and evidence for Member States, including the WHO European Region "Focus on Best Buys Series" reports on alcohol marketing and pricing (WHO, 2020c and 2020d), the Health Evidence Network synthesis report on labelling of alcoholic beverages (Jané-Llopis et al., 2020), the WHO report on implementation of alcohol control policies in the Commonwealth of Independent States (WHO, 2020g), and the final report on implementation of the EAPA (WHO, 2020f).

In addition, the current report marks the launch in the WHO European Region of the global SAFER initiative. This initiative and technical package, launched by WHO in 2018, outlines five high-impact strategies that can help governments reduce the use of alcohol and alcohol-related health, social and economic consequences (WHO, 2018b, 2018c and 2019d). Each letter stands for a strategic action:

Strengthen restrictions on alcohol availability

Advance and enforce drink-driving countermeasures

Gacilitate access to screening, brief interventions and treatment

Inforce bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion

Raise prices on alcohol through excise taxes and pricing policies.

The overall objective of the SAFER initiative is to provide support for Member States in reducing the levels of alcohol use by enhancing the ongoing implementation of the global alcohol strategy and other WHO and United Nations instruments.

SAFER consists of multiple interrelated components:

- WHO-led package of technical guidance on effective policy and programme interventions
- > WHO/United Nations-led operational programme focusing on country action
- multi-stakeholder communication and advocacy campaign
- SAFER monitoring and surveillance system as part of the regular WHO monitoring and surveillance systems.

The report first summarizes levels of alcohol consumption and harms in the WHO European Region in 2016, noting changes that occurred between 2010 and 2016. Next there is an analysis of the regional implementation of each of the five strategies that form the SAFER action package (WHO, 2018b and 2018c), followed by an analysis of the other areas for policy action as outlined in the Global Strategy to Reduce the Harmful Use of Alcohol (WHO, 2010) and the EAPA. Using composite indicators that were developed for the WHO alcohol policy scoring tool (WHO, 2017), the report provides a comparison of the alcohol policy implementation of the 10 EAPA action areas between 2016 and 2019. The overview of the indicators makes clear that, while there has been some progress in some areas, the need to implement alcohol policies for a safer WHO European Region remains urgent; in particular, key areas of the SAFER action package, such as pricing policies and provision of screening and brief interventions for alcohol within health systems, remain the least implemented parts of the package within the Region.

Thus, this report is intended both to mark the launch of the SAFER initiative in the WHO European Region and to provide tailored information to all 53 of the Region's Member States that is relevant to decision-making and priority-setting.

2. Sources of data and methods



The main data source used for the report is the WHO Global Survey on Alcohol and Health (Poznyak et al., 2013), which is used to update on a regular basis the WHO Global Information System on Alcohol and Health (WHO, 2021).

The last iteration of the Global Survey on Alcohol and Health was conducted in 2016, in collaboration with all six WHO regional offices, and its outcomes are reported in the *Global status report on alcohol and health 2018* (WHO, 2018a). A more detailed analysis of the same dataset for the European Union, Norway and Switzerland appears in the *Status report on alcohol consumption, harm and policy responses in 30 European countries 2019* (WHO, 2019b). The methodology underlying these reports, including the specific modelling procedures, can be found in the respective publications and is also described in greater detail in a separately published document that gives information on the data sources and methods used for the 2019 European status report (WHO, 2019c).

The present contribution is therefore a more detailed analysis of the indicators that are presented in the *Global status report on alcohol and health*, with a broad focus on the entire WHO European Region and its 53 Member States.

Further alcohol-related indicators were used from the WHO European Regional Information System on Resources for the Prevention and Treatment of Substance Use Disorders, which is informed by data collected as part of the ATLAS on Substance Use (ATLAS-SU) project. Together with data from the Global Survey on Alcohol and Health, this information was used to calculate composite policy indicators to measure alcohol policy implementation in all 10 EAPA action areas in order to document the extent to which Member States had made progress in each area.

The EAPA composite indicators were calculated for all Member States of the WHO European Region for which sufficient data were available. The scores for each action area are presented in a scale from 0 to 100 to allow easy comparison across areas and countries.

The methodology for calculating the 10 EAPA composite indicators is described in greater detail in a separate publication, where the construction of the specific scoring scheme and scales are explained and the robustness of the indicators discussed (WHO, 2017). While the present report focuses on changes in policy implementation of the 10 action areas between 2012 and 2016, the most recent data for the WHO European Region from the 2019 WHO Global Survey on Progress on SDG Health Target 3.5 (WHO, 2020i) are used to partially update the regional policy scores and provide, in the penultimate chapter of the report (section 6.2), a snapshot of the state of alcohol policy implementation for the year 2019.

3. Alcohol use in the WHO European Region

3.1 Drinking status and average alcohol per capita consumption in 2016

In 2016, 60% of adults (age 15+ years)¹ in the WHO European Region were current drinkers (69% of males, 51% of females), defined as having used alcohol in the previous 12 months. About 23% (17% of males, 29% of females) were lifetime abstainers, while the rest were former drinkers – individuals who had consumed alcohol at some point in their life but not in the previous 12 months. In the same year, 44% of 15–19-year-olds were current drinkers (53% of males, 34% of females), while 40% had never consumed alcohol (31% of males, 50% of females).

Box 1. Understanding alcohol per capita consumption (APC) Average total alcohol per capita consumption (APC) among adults in the WHO European Region in 2016 was 9.8 litres of pure alcohol, comprising 8 litres of recorded alcohol and 1.8 litres of unrecorded alcohol (Box 1). Males and females consumed on average 16.0 litres and 4.2 litres of pure alcohol, respectively, per year, meaning that the average level of drinking was nearly four times higher in men.

APC is the most important indicator used to monitor levels and trends of alcohol consumption. It measures the amount of absolute or pure alcohol consumed by each person, on average, in a stated period of time. Used as a measure of a country's alcohol consumption relative to its population, it consists of two components: amount of alcohol consumed and population size.

In the global WHO monitoring framework, APC is measured as **total adult APC**, which is calculated as the total amount of alcohol in litres of pure alcohol consumed per person aged 15 years or older in a calendar year.

Total APC is the sum of recorded and unrecorded alcohol, adjusted for tourist alcohol consumption.

Recorded alcohol is alcohol consumed as a beverage that is recorded in official statistics, such as data on alcohol taxation or sales. **Unrecorded alcohol** is alcohol that is not accounted for in official statistics on alcohol taxation or sales in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government control. Unrecorded alcohol is a broad umbrella term for different alcoholic products such as homemade or informally produced alcohol (legal or illegal), smuggled alcohol, surrogate alcohol (which is alcohol not intended for human consumption), and alcohol obtained through cross-border shopping (which is recorded in a different jurisdiction). **Tourist alcohol consumption** denotes consumption by tourists (tourists visiting a country and inhabitants of a country visiting other countries), calculated on the basis of data from the United Nations World Tourism Organization on tourist flows in and between different countries. Tourist consumption can be net negative or net positive, depending on the net flow of tourists and whether the tourists visiting a given country drink more or less, on average, than that country's inhabitants themselves drink as tourists. It can therefore be added or subtracted from a country's sum total of recorded and unrecorded alcohol.

¹ Throughout this analysis, "adult" is defined as a person of 15 years or over.



Fig. 1. Total APC (15+ years) in litres of pure alcohol in the WHO European Region, by country (2016)

Fig. 1 (previous page) shows the total APC among adults for the year 2016 in 51 Member States of the WHO European Region;² it includes recorded and unrecorded alcohol and is adjusted for tourist APC. While the picture for the Region as a whole was very mixed, the figures highlight that, overall, countries of eastern and central Europe, as well as some countries of western Europe, had the highest levels of drinking – more than twice as high as the global average of 6.4 litres per capita and substantially higher than the regional average of 9.8 litres per capita (WHO, 2018a).

Fig. 2. Total APC (15+) in litres of pure alcohol among current drinkers (2016) When considering current drinkers only, defined as people who have consumed alcohol in the previous 12 months, and excluding lifetime abstainers and former drinkers, the average total APC was 23.1 litres for men and 8.2 litres for women. Fig. 2 shows the regional distribution of APC among current drinkers in 2016.



Generally, drinking levels were lower in northernmost and southernmost countries in the western part of the Region and higher in the middle band reaching to the easternmost part of the Region. A detailed country-by-country comparison between Fig. 1 and Fig. 2 suggests that, while some countries, especially in the eastern part of the Region, had relatively low APC at population level, among drinkers only it was relatively high. Taken together with relatively high abstention rates in these countries, this means that, while the absolute number of drinkers may have been small, they drank a lot per capita. The distribution of overall APC in terms of recorded and unrecorded alcohol varied substantially across countries in 2016 (Fig. 3). The changes that occurred in this distribution between 2010 and 2016 are illustrated in Annex 1.

² Data were not reported in two of the 53 Member States of the WHO European Region: Monaco and San Marino.



Fig. 3. Distribution of total APC (15+ years) in terms of recorded and unrecorded alcohol adjusted for tourist consumption, in litres of pure alcohol, by country (2016)^a

^a The coloured bars show the proportions of recorded (blue) and unrecorded (orange) alcohol adjusted for tourist consumption (green). Estimates of tourist consumption are based on: the number of tourists who visited a country; the average amount of time they spent in the country; how much these people drink on average in their countries of origin; and the assumptions [1] that people drink the same amount of alcohol as tourists as they do in their home countries and [2] that global tourist consumption is equal to 0 (and hence that tourist consumption can be net negative or net positive).

3.2 Changes in drinking status and APC between 2010 and 2016

At country level, 34 Member States of the WHO European Region reported overall decreases in total adult APC between 2010 and 2016, while 17 countries reported overall increases (Fig. 4). Over the Region as a whole, total adult APC declined from 11.2 litres (comprising 9.1 litres of recorded alcohol and 2.1 litres of unrecorded alcohol) in 2010 to 9.8 litres (8 litres recorded, 1.8 litres unrecorded) in 2016 – a relative decrease of 12.5% (Table 1, overleaf). This overall reduction of 1.4 litres represents a 12.5% decrease in total APC, with a 1.1-litre reduction in recorded alcohol use and a 0.3-litre reduction in unrecorded alcohol use in the population aged 15 years and over.

APC among 15–19-year-olds in the Region decreased from 6.1 to 5.2 litres of pure alcohol between 2010 and 2016, while the percentage of current drinkers in this age group decreased from 49% to 44%. In 20–24-year-olds, APC decreased from 11.4 to 9.5 litres of pure alcohol in the same period. The percentage of current drinkers also decreased in this group, from 63% in 2010 to 59% in 2016. APC in older age groups also decreased between 2010 and 2016, from 12.1 to 10.6 litres in 50–64-year-olds and from 8.3 to 7.5 litres in those aged 65 and older.

While the majority (two thirds) of the 51 countries in the WHO European Region that reported data saw overall decreases in total adult APC between 2010 and 2016, there were substantial variations observed between countries (Fig. 4, Table 1). Although the majority of countries where decreases were observed reported only moderate decreases of between 1% and 10%, there were several countries where substantial declines occurred. Adult APC declined by at least 10% in a total of 16 countries, half of which were members or associate members of the Commonwealth of Independent States (CIS), a free association of sovereign states formed in 1991 by countries of the former Soviet Union.

In sum, by 2016 only 16 of 51 countries of the WHO European Region had met the global noncommunicable disease (NCD) target of a 10% relative reduction in the harmful use of alcohol by 2025 – assuming that no increases are observed in these countries before 2025 (WHO, 2013). Notably, decreasing drinking levels were observed in nine of the 11 CIS countries in 2016, eight of which were relative decreases of at least 10% compared to 2010.



WHO European Region, APC (15+ years) fell by 12.4%, from 11.2 litres to 9.8 litres, between 2010 and 2016. However, differences between countries were large and levels of consumption remained higher than in any other WHO region. On the positive side, most countries saw their consumption levels decrease, and 16 countries demonstrated substantial relative decreases of at least 10%.

On average across the

-			Relative change 2010–	2016 (%)
Belarus	⊢ •-1			-36.1
Ukraine	⊢			-40.2
Russian Federation				-26.1
Kyrgyzstan		⊷⊣		-38.7
Montenegro				-27.3
Republic of Moldova				-15.4
Romania				-15.9
Croatia				-20.5
Azerbaijan				-72.2
Finland				-14.9
Netherlands		F <mark>●</mark> -{		-16.6
Kazakhstan				-17.2
Norway				-17.0
WHO European Region				-12.5
Portugal		⊢ <mark>→→→</mark>		-8.8
Bosnia and Herzegovina		⊢⊷		-12.4
United Kingdom		⊢		-7.0
Estonia				-6.8
Hungary		⊢_		-5.7
Serbia		H I		-5.2
Georgia		⊢ → →↓		-5.5
Turkmenistan				-9.0
Spain				-5.0
Uzbekistan		H		-16.2
Cyprus				-4.5
Denmark		⊢→→		-4.4
Albania				-5.6
Slovakia		⊢ ⊷ -1		-3.5
Austria		⊢		-3.0
Sweden		⊢ 		-3.4
Turkey		H e l		-10.3
Lithuania		⊢ <mark>→</mark> -		-0.9
Armenia		H <mark>++</mark>		-2.1
Greece				-0.1
Switzerland				+1.2
Poland		⊢ <mark>⊷</mark> •−1		+2.3
France				+3.0
Luxembourg				+3.2
Czechia		<mark>⊢_</mark> •		+2.9
Germany				+3.3
Italy		<mark>⊢</mark> •-1		+7.0
Bulgaria				+5.6
Ireland				+5.4
Belgium				+6.8
Tajikistan		<mark></mark> +		+35.9
Israel		<mark>⊢ ⊢</mark> +		+30.2
Malta				+16.2
Slovenia				+10.1
Latvia				+11.2
Iceland				+22.9
North Macedonia				+28.1
	8 -	4 0	4	
		APC change (in litres of pure alcohol)	Recorded Unrecorded	Touris

Fig. 4. Change in total APC (15+ years) at country level, in litres of pure alcohol, between 2010 and 2016^a

^a Round black dots represent change in total APC; the thin "whiskers" to the left and right of each dot show confidence intervals.

 Table 1. Relative change in total APC (15+ years) at country level between 2010 and 2016 (%)
 Clower APC

Higher APC \rightarrow

	Total APC 2010 (litres of pure alcohol)	Total APC 2016 (litres of pure alcohol)	Relative change 2010–2016 (%)
WHO European Region	11.2	9.8	-12.5
Albania	7.9	7.5	-5.6
Andorra	11.4	11.3	-0.7
Armenia	5.6	5.5	-2.1
Austria	12	11.6	-3.0
Azerbaijan	2.9	0.8	-72.2
Belarus	17.5	11.2	-36.1
Belaium	11.4	12.1	6.8
Bosnia and Herzegovina	7.3	6.4	-12.4
Bulgaria	12	12.7	5.6
Croatia	11.2	8.9	-20.5
Cyprus	11.3	10.8	-4.5
Czechia	14	14.4	2.9
Denmark	10.9	10.4	-4 4
Estonia	12.4	11.6	-6.8
Finland	12.6	10.7	-14.9
France	12.0	12.6	3.0
Georgia	10 /	9.8	_5.5
Germany	12.9	13 /	3.3
Greece	10 /	10.4	_0.1
Hundary	12.1	11 /	57
	7 /	0 1	22.0
Ireland	12.2	10	5.4
	2.0	20	0.4 20.2
Isidet	Z.7 7	7.5	
Kazakhatan	/	7.5	17.0
Kazaknstan	9.3	/./	-17.2
kyrgyzstan	11.(0.2	-38.7
	15.1	12.9	11.2
	15.1	10	-0.9
Luxembourg	12.6	13	3.2
Matta	/	8.1	16.2
Montenegro	10 /	٥ 7	-27.3
Netherlands	10.4	8./	-16.6
North Macedonia	6.3	8.1	28.1
Norway	9	/.5	-17.0
Poland	11.4	11.6	2.3
Portugal	13.5	12.3	-8.8
Republic of Moldova	17.9	15.2	-15.4
Romania	15	12.6	-15.9
Russian Federation	15.8	11.7	-26.1
Serbia	11.7	11.1	-5.2
Slovakia	11.9	11.5	-3.5
Slovenia	11.5	12.6	10.1
Spain	10.5	10	-5.0
Sweden	9.5	9.2	-3.4
Switzerland	11.4	11.5	1.2
Tajikistan	2.4	3.3	35.9
Turkey	2.2	2	-10.3
Turkmenistan	6	5.4	-9.0
Ukraine	14.3	8.6	-40.2
United Kingdom	12.3	11.4	-7.0
Uzbekistan	3.2	2.7	-16.2

3.3 Heavy episodic drinking in 2016

Heavy episodic drinking (HED) is defined as an intake of 60 g or more of pure alcohol on at least one occasion over the previous 30 days. When expressed in volumes of typical alcoholic beverages, 60 g of pure alcohol is equivalent to about 1500 ml of beer, 600 ml of wine or 60 ml of spirits.

HED is one of the most important indicators for acute consequences of alcohol use, such as injuries and poisonings. Across the WHO European Region in 2016, the overall prevalence of HED was 26.4% in the adult (15+) population, but it was markedly higher among males than females: 40.5% in men and only 13.5% in women. There were also significant variations in HED prevalence across countries (Fig. 5). **Fig. 5.** Prevalence of HED among adults (15+ years) in the WHO European Region in 2016 (%)





3.4 Changes in HED and drinking prevalence between 2010 and 2016

Between 2010 and 2016, the average prevalence of HED among adults (15 years and over) decreased from 31.6% to 26.4% – a statistically significant proportional drop of 16.3%. During this period, HED became less prevalent in 48 of the 51 countries of the WHO European Region that reported data. Moreover, the proportion of current drinkers in the Region fell from 65% in 2010 to 60% in 2016, while the proportion of lifetime abstainers rose slightly from 22% to 23% over the same period.

The percentage of current drinkers and those who engaged in HED also decreased in both older age groups. Among 50–64-year-olds, the proportion of current drinkers fell from 66.7% to 61.6%; the prevalence of HED from 30.9% to 25.8%. Among those aged 65 years and above, meanwhile, the proportion of current drinkers fell from 57.2% in 2010 to 53.0% in 2016, while HED declined over the same period from 13.1% to 10.7%.

4. Burden of mortality and morbidity in the WHO European Region

4.1 Proportion of the disease burden attributable to alcohol in the WHO European Region

Globally, the WHO European Region has the highest share of deaths that are caused by alcohol consumption (WHO, 2018a). In 2016 a total of 10.1% of all deaths within the Region were alcohol-attributable.

When looking at the main causes of deaths in the Region, such as cardiovascular diseases (CVDs), malignant neoplasms (cancers), digestive diseases and injuries, it can be seen that a relatively large proportion of these deaths was attributable to alcohol use. Table 2 gives an overview of the alcohol-attributable fractions of the six broadest mortality categories. The alcohol-attributable fraction denotes the proportion of deaths in a given mortality category that were caused by alcohol, defined as those deaths that would not have occurred in a counterfactual scenario in which no alcohol was consumed.

Table 2. Alcohol-
attributable
fractions of cause-
of-death categories
in the WHO
European Region,
by sex (2016)^a

Cause-of-death category	Alcohol-attı	ributable fra	ction (%)
	Females	Males	Total
Communicable, maternal, perinatal and nutritional conditions	4.0	10.9	7.8
Malignant neoplasms (cancers)	3.8	8.2	6.2
CVDs	11.1	9.9	10.5
Digestive diseases	21.3	37.7	30.5
Unintentional injuries	17.9	35.7	29.6
Intentional injuries	29.0	41.7	38.8
All causes	7.8	12.3	10.1

^a The table shows the alcohol-attributable fractions of different cause-of-death categories, thus the proportion of all deaths in a given category that were caused by alcohol. This is defined as the proportion of deaths in the category that would disappear if alcohol consumption were removed.

Overall, alcohol consumption has a causal impact on more than 200 health conditions (diseases and injuries) (Rehm et al., 2017). Roughly every 10th CVD death and every third death from digestive diseases were alcohol-attributable in 2016. Alcohol's contribution to injury mortality was the highest: nearly every third death from unintentional injuries (road traffic injuries, poisoning, falls, fires, drowning, etc.) and two out of five deaths from intentional injuries (suicide, homicide and other interpersonal violence) were due to alcohol use. With the exception of CVDs, the alcohol-attributable proportions of mortality were higher for males than for females.

Overall, CVDs make up the largest mortality category and are the leading cause of death both globally and in the WHO European Region. Assessed conservatively, 10.5% of all CVD deaths in the WHO European Region in 2016 were caused by

alcohol (9.9% in men, 11.1% in women). In absolute numbers, this means that there were over 420 000 alcohol-attributable CVD deaths in that year in the Region.

In absolute numbers, when considering all causes of death, a total of 928 841 deaths in the WHO European Region in 2016 were estimated to be alcohol-attributable, meaning that every day around 2545 people died from alcohol-attributable causes.

Compared to other major NCD risk factors such as tobacco use, a relatively high proportion of alcohol harm occurs early in the life course, as shown in Fig. 6, which highlights that in 2016 the largest proportion of alcohol-attributable deaths occurred among 30–34-year-olds. Nearly one in every four deaths (23.3%) among young adults aged 20–24 years was attributable to alcohol use in 2016, with a higher proportion among males (26.7%) than females (14.2%).





^a The orange area along each line represents confidence intervals.

Because of its disproportionate impact on younger people, alcohol not only affects demographic trends but is also a leading cause of working life years lost and hence of losses in economic development and productivity. The economic burden of workplace productivity reduced by alcohol use is substantial and affects the mental health and well-being of individuals, families and friends, communities, and society as a whole.

Various concepts are used to give a more nuanced view of the consequences of alcohol use than mortality rates alone. The concept of years of life lost (YLLs) gives greater weight to deaths that occur among younger people by quantifying the years lost between the actual age at death and the expected or fixed life expectancy. Overall, alcohol use caused 13.1% of YLLs in the WHO European Region in 2016, representing 25.3 million years lost prematurely because of alcohol consumption. In other words, one in every eight YLLs in the Region in 2016 was due to alcohol.

A similar concept uses the idea of years lived with disability (YLDs) as a measure that captures the burden of living with a disease or disability. Two categories – injuries and alcohol use disorders – account for 90.4% of all alcohol-attributable YLDs. Together, YLLs and YLDs can be combined to calculate disability-adjusted life years (DALYs), which is the most commonly used measure to capture the overall disease and disability burden including mortality. One DALY can be thought of as one year of healthy life lost.

Table 3. Alcohol-
attributable
fractions of
burden-of-disease
categories
(measured in
DALYs) in the WHO
European Region,
by sex (2016)^a

The distribution of alcohol-attributable fractions of DALYs across different disease and injury categories was similar in 2016 to that of alcohol-attributable fractions for mortality, but with slightly higher proportions, in both sexes, for all categories except for communicable, maternal, perinatal and nutritional conditions (Table 3). In other words, for these outcomes, alcohol played an even greater role in causing harm that resulted in morbidity and disability. For instance, 35.6% of all DALYs due to digestive diseases and 39.8% of all DALYs due to intentional injuries were alcohol-attributable in 2016, meaning that a large proportion of years of life lost to these disease and injury categories was causally linked to alcohol intake.

Burden-of-disease category	Alcohol-a	attributable fra	ction (%)
	Females	Males	Total
Communicable, maternal, perinatal and nutritional conditions	2.6	7.7	5.5
Malignant neoplasms (cancers)	4.1	8.6	6.6
CVDs	11.2	10.8	11.0
Digestive diseases	27.4	40.6	35.6
Unintentional injuries	23.3	36.6	31.9
Intentional injuries	30.7	42.4	39.8
All causes	7.1	14.0	10.8

^a The table shows the alcohol-attributable fractions of specific burden-of-disease categories, thus the proportion of the total burden of disease in a given category that was caused by alcohol; in other words, the proportion of the burden of disease that would disappear if alcohol consumption were removed.

Alcohol produces a substantial burden of disease, globally and in the WHO European Region in particular. In 2016 the WHO **European Region was the** region both with the highest alcohol intake and with the highest proportions of alcohol-attributable mortality and morbidity. Overall, 10.1% of all deaths in the Region in 2016 were caused by alcohol - in absolute numbers, this amounted to almost 1 million deaths. Moreover, 13.1% of all YLLs and 10.8% of all DALYs were alcohol-attributable.

Thus, in broad terms, one in every 10 deaths, one in every 10 DALYs and one in every eight YLLs in the Region were causally linked to alcohol use. Overall, alcohol caused 31.9 million DALYs in the WHO European Region in 2016. One in every 10 DALYs (10.8% of all DALYs) in the Region in 2016 was attributable to alcohol use.

Globally, the WHO European Region was the region with the highest percentage of all deaths attributable to alcohol consumption in 2016 and the highest percentage of all DALYs attributable to alcohol consumption. However, this was also the region that reported the largest proportional drops in alcohol-attributable deaths and DALYs between 2010 and 2016. During this time window, age-standardized alcohol-attributable deaths (from all causes) per 100 000 decreased by 25.3%, and by 23.3% for age-standardized alcohol-attributable DALYs per 100 000 (WHO, 2018a).

4.2 Alcohol-attributable burden of disease in younger age groups and changes between 2010 and 2016

Between 2010 and 2016 alcohol-attributable deaths among adolescents and young adults declined by more than one third, but alcohol continued to be a major cause of death for these groups and a leading cause of YLLs in the working population. As described in section 4.1, the proportion of people who died as a consequence of alcohol use was higher for younger age groups than for older ones. However, these proportions decreased between 2010 and 2016, when alcohol-attributable deaths among 20–24-year-olds fell from 30.4% to 23.3%; among males, the proportion fell from 33.9% to 26.7%, and among females, from 20.0% to 14.2% (Table 4).

At the same time, the period 2010–2016 saw a parallel decline in the proportion of the alcohol-attributable burden of disease in younger age groups (Table 5). Among 20–24-year-olds the disease burden (measured in DALYs) attributable to alcohol fell from 19.4% to 14.5%; among males, the proportion fell from 25.2% to 19.4%, and among females, from 10.7% to 8.0%.

Table 4. Alcohol-attributable fractionsof cause-of-deathcategories in theWHO EuropeanRegion, by age andsex (2010 and 2016)

Age group	Alcohol-attributable fraction (%)							
		2010			2016			
	Females	Males	Total	Females	Males	Total		
		All	causes of death					
15–19 years	14.9	24.1	21.1	10.6	18.2	15.6		
20–24 years	20.0	33.9	30.4	14.2	26.7	23.3		
All ages	9.8	14.5	12.2	7.8	12.3	10.1		
-			CVDs					
15–19 years	5.9	8.1	7.3	4.3	6.5	5.7		
20–24 years	10.4	13.3	12.3	7.1	10.4	9.3		
All ages	13.2	11.4	12.4	11.1	9.9	10.5		
		Dig	estive diseases					
15–19 years	18.5	22.8	21.0	14.7	21.8	18.6		
20–24 years	34.8	41.2	39.0	28.2	37.0	33.6		
All ages	24.2	40.1	33.0	21.3	37.7	30.5		
		Unin	tentional injurie	'S				
15–19 years	30.6	35.9	34.6	24.3	28.5	27.4		
20–24 years	37.9	44.1	43.0	30.3	36.7	35.5		
All ages	22.8	41.6	35.6	17.9	35.7	29.6		
Intentional injuries								
15–19 years	27.3	35.4	33.2	17.7	27.1	24.2		
20–24 years	38.6	46.7	45.3	27.8	38.5	36.4		
All ages	35.0	47.1	44.4	29.0	41.7	38.8		

Although the alcohol-attributable fractions declined for all age groups and for all analysed causes of death between 2010 and 2016, it should be pointed out that alcohol-attributable deaths in younger age groups, mainly driven by early death from injuries, are still unacceptably high. Table 5. Alcohol-
attributable fractions
of burden-of-
disease categories
(measured in DALYs)
in the WHO European
Region, by age and
sex (2010 and 2016)

Age group	Alcohol-attributable fraction (%)								
		2010			2016				
	Females	Males	Total	Females	Males	Total			
			All causes						
15–19 years	6.8	15.3	11.6	5.0	11.4	8.5			
20–24 years	10.7	25.2	19.4	8.0	19.4	14.5			
All ages	8.7	16.3	12.9	7.1	14.0	10.8			
	CVDs								
15–19 years	5.1	7.3	6.4	3.7	5.8	4.9			
20–24 years	9.6	12.5	11.5	6.6	9.6	8.5			
All ages	13.8	12.4	13.0	11.2	10.8	11.0			
		Dig	jestive diseases						
15–19 years	15.5	20.2	18.0	13.0	19.0	16.2			
20–24 years	26.3	36.1	32.2	21.1	30.8	26.7			
All ages	31.2	43.1	38.6	27.4	40.6	35.6			
-		Unin	tentional injurie	5					
15–19 years	28.1	35.9	33.6	22.3	29.2	27.1			
20–24 years	36.1	44.1	42.3	29.3	37.4	35.4			
All ages	27.4	41.5	36.8	23.3	36.6	31.9			
Intentional injuries									
15–19 years	26.5	35.2	32.7	17.5	27.0	24.0			
20–24 years	37.5	46.5	44.8	27.2	38.2	36.0			
All ages	36.1	47.6	45.2	30.7	42.4	39.8			

Much alcohol-attributable harm occurs early in the life course, and alcohol-attributable deaths, diseases and disabilities, driven mainly by unintentional injuries such as road traffic injuries, disproportionally affect young people. Among 20–24-year-olds, alcohol was responsible for nearly one in every four deaths in 2016, while almost one in every six deaths among 15–19-year-olds was causally linked to alcohol.

The proportions of alcohol-attributable deaths may have decreased since 2010, but still, in 2016, 29.6% of all deaths due to unintentional injury and 38.8% of those due to intentional injury were attributable to alcohol.

4.3 Distribution of alcohol-attributable mortality by specific causes of death

Table 6. Distribution

of alcoholattributable mortality (number of deaths and proportion of all alcohol-attributable deaths), by cause of death and sex (2016) When looking at alcohol-attributable mortality only – the proportion of deaths that were caused by alcohol or that would not have occurred in a counterfactual scenario of no alcohol consumption – it becomes clear that the great majority of alcohol-attributable deaths occurring in the WHO European Region were caused by NCDs: of 928 841 alcohol-attributable deaths that occurred in the Region in 2016, 78.5% were due to NCDs. The main causes were CVDs, cancers and digestive diseases, while 17.4% were due to injuries and only 4.1% were due to communicable diseases and other conditions (Table 6).

Cause of death	Females		Males		Total		
	Number	%	Number	%	Number	%	
Communicable, maternal, perinatal and nutritional conditions	8992	2.5	28 785	5.0	37 777	4.1	
NCDsª	316 739	88.7	412 516	72.1	729 256	78.5	
Malignant neoplasms (cancers)	35 635	10.0	96 937	17.0	132 572	14.3	
Alcohol-use disorders	11 319	3.2	46 207	8.1	57 526	6.2	
CVDs	240 783	67.5	180 002	31.5	420 784	45.3	
Liver cirrhosis	34 837	9.8	74 185	13.0	109 022	11.7	
Injuries	31 242	8.8	130 567	22.8	161 808	17.4	
Unintentional injuries	19 729	5.5	75 113	13.1	94 842	10.2	
Harm to others ^b	5088	1.4	11 297	2.0	16 385	1.8	
Intentional injuries	11 513	3.2	55 453	9.7	66 967	7.2	
All causes	356 973	100.0	571 868	100.0	928 841	100.0	

^a The sum of the deaths in the NCD subcategories exceeds the number of deaths in the main category because the beneficial effects of alcohol use in diabetes leads to some deaths avoided.

^b "Harm to others" (a subcategory of unintentional injuries) includes a wide range of injury and harm caused to others by an individual's drinking, such as deaths of other road users, victims of domestic violence, etc.

It is worth noting that, of these 928 841 alcohol-attributable deaths, only 57 526 deaths, or just 6.2%, were due to alcohol use disorders themselves; there were more than twice as many due to cancers, nearly three times as many due to injuries, and more than seven times as many due to CVDs. This highlights the fact that most of the harm done by alcohol is not due to alcohol use disorders themselves (alcohol dependence, alcoholic psychosis, etc.); rather, most of the deaths are caused by conditions such as cancers and CVDs which are largely due to alcohol use as a health behaviour. For this reason, reduction of alcohol use in the population should be seen as a broad public health concern, not just as an issue limited to addiction treatment or even to provision of health services.

Also worth highlighting in Table 6 is the subcategory "Harm to others", which includes the wide array of harms caused by an individual's alcohol use to people other than the drinker. Examples include deaths of other road users caused by drivers under the influence of alcohol, the effects of alcohol use during pregnancy on the fetus and early child development, alcohol-attributable violence such as violence against women and girls and sexual violence, family and relationship breakdown, and workplace harms such as absences, lost productivity and additional burdens to others (Babor et al., 2010; Burton et al., 2017; WHO, 2010).

4.4 Regional distribution and changes in alcoholattributable burden of disease between 2010 and 2016

The patterns of alcohol-attributable disease burden are different across different WHO European Region countries. The largest age-standardized alcoholattributable mortality rates are observed in the eastern part of the Region, in particular the central Asian republics and eastern Europe, while the lowest are observed in south-western countries (Fig. 7). Fig. 7. Agestandardized mortality rate per 100 000 attributable to alcohol use in the WHO European Region (2016)



Using DALYs as a combined measure to express years lost to ill health, disability or premature death allows us to form a more complete picture (one that goes beyond mere mortality statistics) of the disease burden due to alcohol borne by individuals in different populations. Fig. 8 illustrates the alcohol-attributable disease burden, expressed in age-standardized rates of DALYs per 100 000 population, observed in countries of the WHO European Region. In absolute numbers, a total of 31 897 792 DALYs were estimated to be alcohol-attributable in 2016, compared to 39 566 225 DALYs in 2010 – a substantial decrease of nearly one fifth (19.0%).



Fig. 8. Agestandardized rate of DALYs per 100 000 attributable to alcohol use in the WHO European Region (2016)

When looking at the alcohol-attributable fractions of all-cause deaths by country, a clear pattern emerges (Table 7). While alcohol-attributable fractions for most countries were below the regional average of 10.1% in 2016, there were several countries in the eastern part of the Region, specifically eastern Europe, that had very high shares of all-cause mortality attributable to alcohol. However, when looking at the proportional changes between 2010 and 2016, these same countries were also, for the most part, the ones with the largest decreases in alcohol-attributable mortality.

As can be seen from Fig. 2, 5, 7 and 8, while there was no clear pattern in the regional distribution of drinking levels and prevalence of HED (though some higher APC and HED indicators were observed for central and eastern Europe), there was a very clear east-west divide when it came to harm. Rates of both age-standardized mortality and DALYs were much higher for the eastern part of the WHO European Region, and in particular for eastern European countries. This suggests that harms from a given amount of drinking were higher for these countries than for countries in the western part of the Region; in other words, there appeared to be a clear "harm per litre" gradient in the Region, with eastern European countries experiencing greater harm despite similar or lower levels of drinking.

Rates of age-standardized mortality and DALYs varied strongly across the WHO European Region, with the highest values observed in eastern Europe. Both indicators decreased between 2010 and 2016, with the largest proportional decreases in alcohol-attributable fractions of all-cause mortality observed in countries that had the highest proportions of alcohol-attributable burden of disease.

These stark regional differences indicate a clear "harm per litre" gradient in the Region, with eastern European countries experiencing greater harm despite similar or lower levels of drinking.

← Lower level Higher level →		Alcoho	ol-attribu	table fracti	fraction (%) Proportional change (%)				nge (%)
	_	2010			2016		2	2010-2016	b
Country	Females	Males	Total	Females	Males	Total	Females	Males	Total
WHO European Region	9.8	14.5	12.2	7.8	12.3	10.1	-2.0	-2.2	-2.1
Albania	3.9	8.7	6.6	3.7	8.5	6.4	-0.2	-0.2	-0.2
Armenia	3.2	8.7	6.1	3.3	8.7	6.0	0.0	0.0	-0.1
Austria	2.6	9.3	5.8	2.3	8.6	5.3	-0.2	-0.8	-0.4
Azerbaijan	4.2	9.5	7.0	3.7	7.8	5.9	-0.4	-1.6	-1.0
Belarus	29.6	28.9	29.3	24.2	23.8	24.0	-5.4	-5.1	-5.2
Belgium	2.8	7.7	5.2	2.8	8.0	5.4	0.0	0.4	0.2
Bosnia and Herzegovina	1.2	7.8	4.5	1.5	7.7	4.6	0.3	-0.1	0.0
Bulgaria	2.6	7.9	5.4	2.9	8.7	5.9	0.3	0.8	0.6
Croatia	3.1	11.3	7.1	2.4	10.0	6.1	-0.8	-1.2	-1.0
Cyprus	1.6	6.2	4.0	1.4	5.6	3.6	-0.2	-0.6	-0.4
Czechia	3.2	10.1	6.7	2.9	9.4	6.2	-0.2	-0.7	-0.5
Denmark	3.1	9.6	6.2	2.6	8.6	5.6	-0.5	-1.0	-0.01
Estonia	21.3	22.4	21.8	19.7	20.7	20.2	-1.5	-1.7	-0.02
Finland	2.9	10.4	6.7	2.5	9.1	5.8	-0.4	-1.3	-0.01
France	3.0	9.9	6.5	2.7	8.9	5.8	-0.3	-1.0	-0.01
Georgia	4.5	12.1	8.3	4.2	12.0	8.1	-0.3	-0.1	0.00
Germany	2.8	8.5	5.5	2.7	7.9	5.2	-0.1	-0.5	0.00
Greece	1.9	5.6	3.8	2.0	6.0	4.0	0.1	0.4	0.00
Hungary	3.5	12.4	7.9	3.2	10.8	6.9	-0.3	-1.6	-0.01
Iceland	1.5	5.0	3.3	2.0	5.6	3.8	0.5	0.6	0.01
Ireland	3.2	7.7	5.5	2.8	7.3	5.1	-0.4	-0.3	0.00
Israel	0.9	4.2	2.5	0.8	4.2	2.5	-0.1	0.1	0.00
Italy	2.0	6.0	3.9	1.7	5.7	3.6	-0.3	-0.3	0.00
Kazakhstan	5.4	15.2	10.8	5.5	14.6	10.3	0.0	-0.6	0.00
Kyrgyzstan	6.3	16.8	12.2	5.6	15.1	10.9	-0.7	-1.7	-0.01
Latvia	19.8	22.5	21.1	20.7	22.4	21.5	0.9	-0.1	0.00
Lithuania	26.8	25.3	26.1	25.4	23.6	24.5	-1.4	-1.7	-0.02
Luxembourg	3.6	8.8	6.2	3.0	8.7	5.8	-0.6	-0.1	0.00
Malta	1.3	5.3	3.4	1.5	5.4	3.5	0.2	0.1	0.00
Montenegro	4.8	9.5	7.2	3.8	8.6	6.2	-1.0	-0.8	-0.01
Netherlands	1.8	5.8	3.8	1.7	5.7	3.6	-0.1	-0.1	0.00
North Macedonia	1.3	6.3	3.9	1.4	6.9	4.3	0.1	0.6	0.00
Norway	1.5	5.6	3.5	1.4	5.4	3.4	0.0	-0.2	0.00
Poland	2.8	11.4	7.4	2.9	10.6	6.9	0.0	-0.8	0.00
Portugal	2.3	10.3	6.4	2.2	9.6	5.9	-0.1	-0.7	0.00
Republic of Moldova	31.0	29.3	30.1	25.3	26.9	26.1	-5.7	-2.4	-0.04
Romania	6.1	13.7	10.1	4 7	12.0	8.6	-1.3	-1.6	-0.02
Russian Federation	23.2	26.9	25.1	19.9	23.1	21.6	-3.3	-3.7	-0.04
Serbia	1.5	8.4	5.0	1.6	73	4.5	0.1	-1.1	0.00
Slovakia	3.2	12.1	7.8	3.2	12.9	8.3	0.1	0.9	0.00
Slovenia	3.8	1/, 1	9.0	3.5	12.7	8.0	-0.4	-1 /	-0.01
Snain	2.0	7.2	/ 7	1.8	67	4.3	-0.2	-0.5	0.01
Sweden	13	55	3.4	1.5	5.8	3.6	0.2	0.0	0.00
Switzerland	23	7 1	4.6	2.2	7.0	4.5	_0.1	_0.1	0.00
Taiikistan	2.5	6.4	4.0	2.2	7.0	5.2	0.1	0.1	0.00
Turkey	0.5	2.2	4.7	0.5	2.1	1 /	0.5	_0 1	0.01
Turkmenistan	/. 0	12 /	0.1	5.0	12.1	0.2	0.0	-0.1 0.2	0.00
	4.7 25.9	25.5	25.4	10.0	21.2	20.5	. 6.0	_ /. 2	_0.00
	23.0	7 1	23.0	17.0	<u> </u>	20.0	-0.0	-4.5	0.00
	2.7	7.1	4.8	2.0	0.7	4.0	-0.2	-0.2	0.00
UZDEKISIdII	3.0	0.7	0.0	5.0	0.7	0.0	0.0	0.0	0.00

 Table 7. Alcohol-attributable fractions of all-cause deaths, by country and sex (2010 and 2016)

5. Making the WHO European Region SAFER

5.1 Levels of implementation of SAFER policies in the WHO European Region

WHO launched the SAFER initiative in 2018 as part of the United Nation's Third High-level Meeting on Prevention and Control of Noncommunicable Diseases (WHO, 2018b, 2018c and 2019d). The overall objective of the initiative is to provide support for Member States in reducing the harmful use of alcohol by strengthening the ongoing implementation of the Global Strategy to Reduce the Harmful Use of Alcohol and the EAPA (WHO, 2010 and 2012). SAFER's action package focuses on five key interventions that are based on accumulated evidence of their impact on population health and cost-effectiveness (Fig. 9).

The SAFER action package

- S Strengthen restrictions on alcohol availability
- A Advance and enforce drink–driving countermeasures
- Facilitate access to screening, brief interventions and treatment
- E Enforce bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion
- R aise prices on alcohol through excise taxes and pricing policies

Fig. 9. The SAFER action package and its five key interventions Three of these five interventions were identified by WHO as affordable, feasible and cost-effective intervention strategies to reduce alcohol consumption and NCDs, and therefore recommended to countries as "best buys" because of their optimal cost-effectiveness ratios. These three "best buys" are:

- (1) Increase excise taxes on alcoholic beverages
- (2) Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
- (3) Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale).

These three interventions are considered to be the most cost-effective and feasible for implementation as their average cost-effectiveness ratio is <1\$ 100 per DALY averted in low- and middle-income countries (LMICs).³ SAFER includes these three "best buys" and adds two additional areas that have yielded a cost-effectiveness ratio of >1\$ 100 per DALY averted in LMICs and are considered to be effective.

³ I\$ 1 = 1 international dollar. The international dollar is a hypothetical unit of currency that has the same purchasing power parity that the US dollar had in the United States at a given point in time. It is widely used in economics, most notably to determine and compare the purchasing power parity and gross domestic product of various countries and markets.

Overall, the SAFER initiative recognizes the need to protect public health-oriented policy-making from interference by the alcohol industry, and the importance of a strong and sustainable monitoring system to ensure accountability and facilitate tracking of implementation progress. The levels of implementation of the five SAFER interventions across the WHO European Region are reported below (sections 5.1.1–5.1.5), highlighting the EAPA composite indicators for each of the SAFER interventions in the Region.

The EAPA composite indicators are calculated following a comprehensive methodological approach, which is described in greater detail in *Policy in action: a tool for measuring alcohol policy implementation* (WHO, 2017). The WHO alcohol policy scoring tool consists of 10 composite indicators, representing each of the 10 action areas of the EAPA and the Global Strategy to Reduce the Harmful Use of Alcohol. However, data were not available for all countries or all indicators, which is why the total number of Member States may vary across different indicators in the treatment below. Scores for each action area are scaled from 0–100 for ease of comparison and can therefore be thought of as percentages – thus, a score of 100 would indicate perfect implementation of a given area.



5.1.1 Strengthen restrictions on alcohol availability

Public health strategies to regulate the commercial or public availability of alcohol through laws, policies and programmes are important ways to reduce alcohol-related harm (WHO, 2010; Babor et al., 2010). These strategies can prevent easy access to alcohol by vulnerable and high-risk groups – for instance, through appropriate minimum legal drinking age regulations or through selling restrictions at certain times and/or in certain areas. Where alcohol is (in physical terms) readily available, social and cultural norms that promote the use of alcohol can thrive. Restrictions on alcohol availability have been assessed as a highly effective and cost-effective "best-buy" intervention for NCD prevention (Chisholm et al., 2018).

In 2016 the average EAPA composite policy indicator score for WHO European Region countries in this policy area was 64%, with scores ranging very widely from 6% to 97% (Fig. 10). Almost one fifth of Member States (18.9%) had a score



Fig. 10. Alcohol Policy Scores for Member States in 2016: regulating availability (*n*=53) of greater than 80%, with an additional 19 Member States (35.8%) scoring more than 70%. On average, this was the fourth-highest scoring policy area across the Region.

In 2016, 12 Member States (22.6%) reported government-controlled monopoly arrangements for the retail sale of alcoholic beverages (either for all alcoholic beverages or only for beer or wine or spirits). Of the 41 Member States that did not have a government monopoly, 22 reported licensing the sale of beer, wine and spirits; two reported licensing the sale of wine and spirits but not beer; and three reported licensing the sale of spirits but not beer or wine. Overall, 14 Member States (26.4%) reported that they did not license the sale of any alcohol (beer, wine or spirits).

In 2016 all Member States had a legal minimum age limit for on- and off-premises sales of alcoholic beverages ranging from 16 to 21 years, with 18 years being the most common (Fig. 11).



Fig. 11. Minimum age limit for onand off-premises alcohol sales in Member States in 2016 (*n*=53)

Table 8 shows the number of Member States that reported various types of restriction on on- and off-premises sales in 2012 and 2016. Restrictions on sales at specific events and locations of outlets were the most commonly reported form of availability regulation, with smaller numbers of Member States reporting restrictions on the hours during which alcohol was available for sale. The least implemented restrictions related to density of premises that could sell alcohol and to the days on which alcohol could be sold. The number of Member States that restricted on-premises sales of alcohol to already intoxicated individuals was relatively high, while less than half of all Member States reported restrictions on the sale of alcohol at petrol stations.

In some policy areas (for instance, density regulations), there was a general relaxation of availability policies, though some improvements were seen in other areas. An emerging issue across several Member States was the sale of alcohol at petrol stations, which was not recommended given the potential implications for drink–driving (Rehm et al., 2019a). Between 2012 and 2016, the number of Member States reporting policies to restrict this type of sale increased.

	2012				2016				% change between 2012 and 2016									
Type of restriction	On-premises sales			Off-premises sales		On-premises sales		Off-premises sales		On-premises sales		Off-premises sales						
	Beer	Wine	Spirits	Beer	Wine	Spirits	Beer	Wine	Spirits	Beer	Wine	Spirits	Beer	Wine	Spirits	Beer	Wine	Spirits
On hours	19	20	21	19	20	21	18	18	19	25	25	26	-5.3	-10.0	-9.5	31.6	25.0	23.8
On days	6	6	6	9	10	10	5	5	5	10	11	11	-16.7	-16.7	-16.7	11.1	10.0	10.0
On location	29	29	31	24	25	26	34	34	34	32	32	33	17.2	17.2	9.7	33.3	28.0	26.9
On density	7	7	7	8	9	9	5	5	5	5	6	6	-28.6	-28.6	-28.6	-37.5	-33.3	-33.3
On sales at specific events	34	36	36	30	31	32	35	35	35	33	34	34	2.9	-2.8	-2.8	10.0	9.7	6.3
On sales to intoxicated persons	36	36	36	n/a	n/a	n/a	34ª	34ª	34ª	n/a	n/a	n/a	-5.6	-5.6	-5.6	n/a	n/a	n/a
On sales at petrol stations	n/a	n/a	n/a	16	18	19	n/a	n/a	n/a	21 ^b	21 ^b	22	n/a	n/a	n/a	31.3	16.7	15.8
													< 1000 F	actriction			Mara roat	riction >

^a One Member State missing. ^b Two Member States missing. n/a = not applicable.

Fig. 12 shows the number of Member States with restrictions on alcohol consumption in public places in 2012 (A) and 2016 (B). In 2016 complete or partial statutory bans were most commonly used in educational buildings, followed by sporting events and health-care buildings. Between 2012 and 2016, the WHO European Region saw an increase in the use of statutory bans in health-care facilities, educational buildings, workplaces, public transport, sporting events, places of worship and leisure events. **Table 8.** Number of Member States with restrictions on on- and offpremises alcohol sales in 2012 and 2016, by restriction type (*n*=53)







5.1.2 Advance and enforce drink-driving countermeasures

Road users who are impaired by alcohol have a significantly higher risk of being involved in a fatal or non-fatal crash (Taylor et al., 2010). Drink–driving is a significant public health problem that affects not only the alcohol user but also, in many cases, vehicle passengers and pedestrians (Public Health England, 2019). Even at low blood alcohol levels, drivers may experience problems with concentration, coordination and identification of risks in the road environment (Babor et al., 2010). The introduction and enforcement of drink–driving laws and blood alcohol concentration (BAC) limits for drivers have been identified as effective interventions for NCD prevention.

Drink–driving countermeasures represent the policy area with the highest average score across the WHO European Region, with 60.4% of Member States scoring 80% or higher (Fig. 13).





According to WHO, drink–driving legislation should set BAC benchmark limits of 0.05 g/dl for the general population and 0.02 g/dl for young or inexperienced drivers (WHO, 2004). In 2016 all but three Member States – the United Kingdom (excluding Scotland), Malta and Armenia – reported a maximum legal BAC level of 0.05 g/dl or less for general population drivers, and many countries had lower limits for young or commercial drivers (Table 9).



Table 9. National maximum BAC levels for drivers in the WHO European Region (2016) $(n=52)$) ← Hi

<mark>gher limit → Lower limit →</mark>

Country	General population (g/dl)	Young/novice drivers (g/dl)	Professional/commercial drivers (g/dl)
Armenia	0.08	0.08	0.08
Malta	0.08	0.08	0.08
United Kingdom	0.08	0.08	0.08
Bulgaria	0.05	0.05	0.05
Denmark	0.05	0.05	0.05
Finland	0.05	0.05	0.05
San Marino	0.05	0.05	0.05
Iceland	0.05	0.05	0.05
Andorra	0.05	0.05	0.02
Belgium	0.05	0.05	0.02
Spain	0.05	0.03	0.03
Netherlands	0.05	0.02	0.05
Greece	0.05	0.02	0.02
Cyprus	0.05	0.02	0.02
France	0.05	0.02	0.02
Ireland	0.05	0.02	0.02
Latvia	0.05	0.02	0.02
Luxembourg	0.05	0.02	0.02
Portugal	0.05	0.02	0.02
Turkey	0.05	0.02	0.02
Switzerland	0.05	0.01	0.01
Israel	0.05	0.01	0.01
Austria	0.05	0.01	0.01
Croatia	0.05	0.00	0.00
Germany	0.05	0.00	0.00
Italy	0.05	0.00	0.00
Slovenia	0.05	0.00	0.00
North Macedonia	0.05	0.00	0.00
Lithuania	0.04	0.00	0.00
Russian Federation	0.035	0.035	0.035
Georgia	0.03	0.03	0.03
Montenegro	0.03	0.03	0.03
Republic of Moldova	0.03	0.03	0.03
Tajikistan	0.03	0.03	0.03
Turkmenistan	0.03	0.03	0.03
Bosnia and Herzegovina	0.03	0.00	0.00
Serbia	0.03	0.00	0.00
Belarus	0.029	0.029	0.029
Monaco	0.024	0.024	0.024
Estonia	0.02	0.02	0.02
Norway	0.02	0.02	0.02
Poland	0.02	0.02	0.02
Sweden	0.02	0.02	0.02
Ukraine	0.02	0.02	0.02
Albania	0.01	0.01	0.01
Azerbaijan	0.00	0.00	0.00
Czechia	0.00	0.00	0.00
Hungary	0.00	0.00	0.00
Kazakhstan	0.00	0.00	0.00
Romania	0.00	0.00	0.00
Slovakia	0.00	0.00	0.00
Uzbekistan	0.00	0.00	0.00

Table 10. Types ofpenalty reportedby Member Statesfor drink-drivinginfringements(2012 and 2016)

Random breath testing was reported by 46 Member States in 2012 and 47 Member States in 2016. Sobriety checkpoints were reported less frequently, by 29 Member States in 2012 and 32 Member States in 2016. A range of penalties were reported for drink–driving offenders, with all Member States reporting at least one type of penalty (Table 10). There were increases in the use of all types of penalties between 2012 and 2016 except for imprisonment, where there has been a small decrease, and installation of ignition interlocks, where no change occurred.

Penalty for offenders	2012 (<i>n</i> =52)	2016 (<i>n</i> =53)	Difference (%)
Fines	51	52	+2.0
Driving licence suspension	48	52	+8.3
Imprisonment	34	33	-2.9
Driving licence revoked	28	32	+14.3
Penalty points	26	28	+7.7
Vehicle impounded	23	28	+21.7
Short-term detention	22	28	+27.3
Mandatory education and counselling	16	23	+43.8
Community/public service	10	18	+80
Ignition interlock	5	5	0
Mandatory treatment	n/aª	13	n/aª

^a Data item not collected.

5.1.3 Facilitate access to screening, brief interventions and treatment

Access to health services is essential in preventing and reducing alcohol-related harms (Babor et al., 2010). Health professionals have an important role in helping people to decrease or stop their alcohol use in order to reduce harm. Health services have a duty to provide screening and effective interventions for high-risk drinkers, as well as for their families, before health and social risks become pronounced. There is extensive and consistent evidence that supports the widespread implementation of programmes of early identification and brief advice in primary care settings for persons with hazardous alcohol consumption and possible alcohol use disorders (Babor & Higgins-Biddle, 2001; Burton et al., 2017; Kaner et al., 2018; OECD, 2015). There is also some evidence that similar programmes in reproductive health services for women (before and during pregnancy) and programmes in criminal justice settings (Newbury-Birch et al., 2016; Shogren et al., 2017; Schulte et al., 2014; WHO, 2014a; Wright et al., 2016).

More evidence is required to assess the effectiveness and cost-effectiveness of screening and brief intervention programmes outside primary care settings and to explore the potential of referral mechanisms to specialized treatment settings. There is consistent, high-quality evidence that behavioural and pharmacological therapies are effective in treating alcohol use disorders (Babor et al., 2010). However, it is also known that the majority of people with alcohol use disorders remain undiagnosed and never receive the support and help they need (Kohn et al., 2004; Rathod et al., 2018). Brief psychosocial interventions not only aim to close

this gap in health-care response but are also a promising tool for prevention of NCDs as the leading cause of death globally and in the WHO European Region. More integrated approaches to risk factor identification and management are therefore needed, following the accumulated knowledge and evidence from the field of alcohol and drug research (Breda, 2020; Murphy et al., 2016).

Provision of screening and brief interventions is captured in the action area "health service responses" by the relevant EAPA composite indicator, which also covers the area of treatment of alcohol use disorders.

On average, this policy area was the third-lowest scoring area for policy implementation in 2016, alongside the areas of community and workplace interventions, with an average score of 45% (Fig. 14). Scores were highly variable across countries, ranging from 0% to 88%, though levels of missing data were high (there were 48 Member States with complete data).



Fig. 14. Alcohol Policy Scores for Member States in 2016: health service responses [*n*=48]

In 2016, 30 of 50 Member States with available data (60%) reported that they had clinical guidelines for brief interventions which had been approved or endorsed by at least one health-care professional body, representing an increase from 27 of 51 Member States (52.9%) in 2012. Despite this, estimated coverage was low, with only six of 51 (11.8%) of Member States reporting coverage of more than 30% for routine and selective screening and brief interventions in primary care (Fig. 15). Coverage was better for screening and brief interventions in antenatal settings, with 37.3% of Member States reporting coverage of more than 30%.



Fig. 15. Number of Member States reporting various levels of screening and brief intervention coverage, by health-care setting (2016) (*n*=51) A range of pharmacological medicines can be used to support recovery from alcohol problems. Fig. 16 shows the availability of different pharmacological medicines across the WHO European Region in 2016. In most countries, diazepam, disulfiram and naltrexone were available; however, fewer countries reported the availability of acamprosate.



Fig. 16. Number of Member States reporting availability of various pharmacological treatments (2016) (*n*=48)

> It is important to note, however, that strategies to improve health services need to be more wide-ranging than specified by SAFER. They need to build resilient and robust systems for prevention and recovery from alcohol-related problems that can strike the right balance between delivering universal health coverage and public health, responding promptly and adequately to emergencies, and ensuring healthy lives and well-being for people of all ages.

> The European Programme of Work 2020–2025 – "United Action for Better Health in Europe" (WHO, 2020e) has made universal health coverage its core priority, with the aim of bridging the divide between primary health care and specialized ambulatory and hospital care services, public health and community services and thereby mainstreaming the care continuum from prevention, through screening and early detection, treatment and rehabilitation.

5.1.4 Enforce bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion

Alcohol advertising, sponsorship and promotion all contribute to optimal marketing of a product. There is strong evidence that exposure to alcohol marketing is associated with changes in alcohol-related knowledge, attitudes and behaviour, including changes among vulnerable groups such as children and young people (WHO, 2020c). A matter of particular concern is the targeting of children and young people, as well as new markets in developing countries and LMICs, which have a low prevalence of alcohol consumption or high abstinence rates (Casswell & Thamarangsi, 2009; Walls et al., 2020). Alcohol is increasingly marketed through sophisticated advertising and promotion techniques, which include linking alcohol brands to sports and cultural activities, sponsorships and product placements, and new marketing techniques such as emails, text messaging, podcasts and social media (Gupta et al., 2016; Jernigan et al., 2017; Noel & Babor, 2018; Noel et al., 2020; Nufer & Ibele, 2015). Alcohol marketing messages are promoted across national borders and through different jurisdictions via channels such as satellite television and the internet. Digital and social media have changed the nature of marketing, with alcohol companies increasingly moving into this area (Nicholls, 2012; Carah, 2017; Carah et al., 2014). Sophisticated web technologies, such as internet tracking ad-delivery systems, allow brands to market their products to specific audiences based on their consumption habits or lifestyle choices (Gordon, 2011). "Narrowcast" advertising directed at viewing on tablets and phones can expose children and young people to marketing while bypassing parental scrutiny.

When efficiently operated, alcohol marketing restrictions constitute a cost-effective strategy for reducing the harmful use of alcohol. Advertising restrictions and outright bans have been identified as a highly cost-effective "best buy" intervention for NCD prevention (Chisholm et al., 2018). They can reduce the likelihood of initiation into alcohol use by young people and can limit the normalization of drinking cultures at population level. This is potentially more effective than interventions that seek to encourage individual responsibility in relation to alcohol use.

On average, in 2016, marketing was the policy area with the fifth-best implementation across the WHO European Region, with a score of 60%. However, there was very wide variability in scores, from 0% to 100% (Fig. 17).





Fig. 17. Alcohol Policy Scores for Member States in 2016: alcohol marketing (*n*=53)

Fig. 18 shows marketing regulations for beer, wine and spirits employed by Member States of the WHO European Region in 2016 across a range of media channels or platforms. In most countries, traditional forms of media, such as TV and radio, had some restrictions placed on advertising. By contrast, newer forms of media, including the internet and social media, were often associated with voluntary or no restrictions. In 2016 complete bans on sports sponsorship for all alcohol (beer, wine and spirits) were reported in nine of 53 Member States (17.0%), with a further three Member States (5.7%) banning sports sponsorship for spirits and wine (but not beer) and an additional four Member States (7.5%) banning sports sponsorship for spirits. No restrictions on sports sponsorship were reported in 14 Member States (26.4%), while one Member State reported no restrictions on beer and wine and one reported no restrictions on beer.



Fig. 18. Percentage of Member States with various levels of marketing restriction on beer (A), wine (B) and spirits (C), by media channel/platform (2016)





5.1.5 Raise prices on alcohol through excise taxes and pricing policies

Of all alcohol policy measures, the evidence is strongest that reducing the affordability of alcohol can lower alcohol consumption and alcohol-related harms (Babor et al., 2010; Burton et al., 2017; Chisholm et al., 2018; OECD, 2015; WHO, 2020d). However, many countries underutilize alcohol pricing policies, despite their great potential as tools to improve public health, generate revenue, and redress the external costs of alcohol use to individuals, families and wider society, including the economy and health systems.

When factors such as income and the price of other goods are held constant, a rise in alcohol prices tends to lead to a reduction in its affordability and subsequent alcohol consumption; the opposite effect is observed when prices drop (Wagenaar et al., 2009 and 2010). Policies that increase alcohol prices can contribute to delaying initiation of alcohol use, progression towards consuming larger amounts, and heavy episodic use of alcohol. At the same time, pricing measures such as alcohol taxes can generate ongoing revenue for governments. In addition, there are other pricing policies such as the introduction of a minimum price on alcohol, which has been shown to have an effect on the heaviest drinkers in the population, as well as bans on below-cost sales and volume discounts (Meier et al., 2016 and 2017; WHO, 2020d). Pricing policies are highly cost-effective interventions for NCD prevention and constitute – alongside restrictions on alcohol availability and alcohol marketing – one of the three "best buys" for alcohol reduction (Chisholm et al., 2018).

Despite the strong evidence for use of pricing policies and a very large body of research supporting their effectiveness and cost-effectiveness in reducing health and social harms, this was the most poorly implemented policy area across the WHO European Region in 2016, with an average score of only 17% (Fig. 19). Two-thirds of Member States (66.0%) scored between 0% and 20%, with 10 countries scoring 0%. Only 15 Member States (28.3%) reported regularly adjusting the level of excise duty in line with inflation in 2016, suggesting that, in a large majority of countries, alcohol became more affordable over time (Table 11).





Table 11. Number of Member States implementing price and tax measures (2012 and 2016) In 2016 several Member States reported using price measures other than taxation (Table 11). At the time of the 2016 survey, Belarus, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Slovakia, Ukraine and Uzbekistan reported a minimum price on alcoholic beverages (an increase of three Member States since 2012). A minimum retail price for Slovakia could not be confirmed. Minimum pricing measures at national or subnational levels were identified in more countries in 2020 (Neufeld et al., 2020a; WHO, 2020d).

Member States (n=53) 2012	Member States (n=53) 2016
13 ^{a,b}	15 ^b
5	8
3	3
3	3
5	5
4	5
1	1
	Member States (n=53) 2012 13 ^{a,b} 5 3 5 4 1

^a In one Member State, excise duty was adjusted for inflation only for beer and spirits; in another, it was adjusted only for wine and spirits.

^b This includes data from only 14 Member States for beer, 11 for wine, and 14 for spirits.

5.2 A critical mass – implementing a comprehensive approach

The SAFER interventions are optimal when implemented within an effective policy environment that includes all 10 areas highlighted in both the Global Strategy to Reduce the Harmful Use of Alcohol and the EAPA (WHO, 2010 and 2012).

Comprehensive approaches should include strong leadership and commitments from policy- and decision-makers to ensure accurate monitoring and surveillance of alcohol consumption and harm at local, regional, national and supranational levels and to address harms associated with informal and illicit alcohol. The latter is especially important when introducing measures such as price increases or availability restrictions on alcoholic beverages in order to prevent an increase in the consumption of unrecorded alcohol.

5.2.1 Leadership, awareness and commitment

On average, this was the action area with the second-best implementation across the WHO European Region. In 2016, 41.5% of Member States had a policy score of more than 80% in this area, and a further 34.0% had a policy score between 51% and 80% (Fig. 20).

In 2016, 38 Member States reported that they had a written national policy on alcohol, with a further nine Member States (71.7%) reporting that a written national policy was "in development". All but one Member States indicated that the policy was multisectoral. Compared to 2012, this represented one more Member State with a written policy, but one fewer with a policy in development.



Fig. 20. Alcohol Policy Scores for Member States in 2016: leadership, commitment and awareness (*n*=53)



National strategies are key to implementing SAFER policies since many require commitments at senior levels as well as multisectoral working.

Awareness-raising activities are important as greater awareness can improve public support for more stringent alcohol policies (Buykx et al., 2015) and reduce social norms around alcohol consumption (Burton et al., 2017). In 2016, 49 Member States (92.5%) had carried out some form of national awareness-raising activities in the previous three years, a slight decrease from 51 Member States (96.2%) in 2012. Fig. 21 shows the number of Member States reporting various awareness-raising activities in 2012 and 2016. The most common national awareness-raising activity in 2016 addressed drink–driving (89.8%), followed by youth drinking (81.6%) and parental awareness (75.5%). Although data on all items were not collected in both years, the pattern of activities was similar in 2012 and 2016. Drink–driving, youth/student drinking and impact of alcohol on health were among the most popular areas for awareness-raising activities. By contrast, awareness-raising activities in the areas of indigenous communities, illegal/surrogate alcohol, alcohol and HIV, and alcohol and elderly people were among the least common targets of awareness-raising activities in 2016.



Fig. 21. Number of Member States reporting alcoholrelated awarenessraising activities (2012 and 2016) (*n*=53)

5.2.2 Informal and illicit alcohol

"Unrecorded alcohol" is a broad umbrella term and refers to alcohol that is not accounted for in official statistics on alcohol taxation or sales in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government control (WHO, 2018a). Unrecorded alcohol includes homemade or informally produced alcohol (legal or illegal), smuggled alcohol, alcohol intended for industrial or medical uses but consumed as a beverage (i.e. alcohol surrogates) and alcohol obtained through cross-border shopping (which is recorded in a different jurisdiction). Per litre of alcohol consumed, unrecorded alcohol is considered to have a greater impact on health than recorded alcohol, although the size of this potential problem is not well known and existing evidence suggests this may vary across the different subtypes of unrecorded alcohol.

For SAFER actions to be effective, informally and illegally produced alcohol must be brought into the taxation system by implementing tax stamps, and monitoring systems and computerized tracking of produced alcohol need to be developed. Another important intervention is to prohibit toxic substances such as methanol from being used to denature non-beverage alcohol and thus to prevent surrogate poisonings, which appear to occur regularly in the eastern part of the Region (Lachenmeier et al., 2021; WHO, 2010). This policy area was the third-highest scoring area across the WHO European Region. Despite some variation in scores, 36 of 53 Member States (67.9%) had a policy score of more than 60% in 2016 (Fig. 22).





In 2016 all but two Member States reported that they had national legislation to prevent the illegal production or sale of home-produced or illegally produced alcoholic beverages (an increase of two Member States since 2012). Overall, 33 countries (62.3%) reported using duty-paid or excise stamps on alcohol for

beer, wine or spirits; it was most common for spirits and least common for beer (Table 12). Only seven (13.2%) reported using duty-paid or excise stamps on beer, wine and spirits.

Table 12. Number ofMember States usingduty-paid or excise stampson alcohol (2012 and 2016)

Beverage type	Member States (<i>n=</i> 53) 2012	Member States (n=53) 2016
Beer	14	9
Wine	20	22
Spirits	34	33

Accurate estimates of unrecorded alcohol are an important component of national systems to monitor alcohol consumption. In 2012, 10 Member States reported at least one method of estimation, increasing to 16 Member States in 2016 (Table 13).

Type of estimation	Member States (<i>n=</i> 10)ª 2012	Member States (<i>n=</i> 16)ª 2016
Indirect estimates using survey data	8	5
Research focused on unrecorded alcohol	5	9
Expert opinion	2	6
Indirect estimates using government data on seized alcohol	2	3
Other	Not reported	13

^a Includes double-counting where a Member State reported multiple approaches to estimating unrecorded alcohol.

5.2.3 Monitoring and surveillance

The performance of Member States of the WHO European Region across this action area in 2016 was highly variable, ranging from 13% to 100%. The average policy score in the Region was 57%, and 19 Member States (37.3%) scored over 70% (Fig. 23).



Table 13. Number ofMember States usingvarious methods toestimate unrecordedalcohol (2012 and 2016)



In 2016, of the 51 Member States with complete data, 35 (68.6%) had conducted an adult national survey on alcohol consumption since 2012, and 27 (52.9%) had conducted a youth national survey.

5.2.4 Reducing the negative consequences of drinking and alcohol intoxication

Further complementary actions can be taken to create a "critical mass" effect to boost the sustainability of the outlined measures. These actions ensure a comprehensive approach to reducing alcohol-related harm and include:

- actions to reduce the negative consequences of drinking and intoxication
- **D** community and workplace action (covered in section 5.2.5 below).

Policies in these areas underpin important principles to allow a comprehensive approach to alcohol policy, such as consumer information and harm reduction. Though not included as SAFER policy areas, actions in these areas help to ensure a comprehensive approach to reducing the public health burden of alcohol and enhance the impact of SAFER policies.

In 2016 policy action intended to reduce the negative consequences of drinking and alcohol intoxication (including labelling and server training) was the second-worst implemented policy area in the WHO European Region, with Members States scoring, on average, 35% (Fig. 24). Overall, 36 of 53 countries (67.9%) scored 40% or less, and 17 countries (32.1%) 10% or less.



Fig. 24. Alcohol Policy Scores for Member States in 2016: reducing the negative consequences of alcohol and intoxication (*n*=53)

5.2.4.1 Labelling

As a stand-alone measure, there is new and compelling evidence to support labelling as an intervention to increase knowledge and awareness of harms caused by alcohol and to reduce alcohol consumption at the population level (Vallance et al., 2020a and 2020b; Zhao et al., 2020). However, to realize its full potential as a low-cost and potentially cost-effective measure, this policy should be viewed as a complementary component of a wider package of policies, including comprehensive public information strategies. Health warning labels should be placed on all alcoholic beverage containers as part of broader communication and point-of-purchase health campaigns. In this context, labelling should follow the lessons learned in relation to tobacco regulation, where health warnings on tobacco products and advertisements became a standard practice to inform consumers about the risks that they were taking when consuming tobacco products. Placing health warnings on alcohol advertisements is a better option than not regulating alcohol advertisements at all, although from a public health perspective strict advertising restrictions and comprehensive bans on alcohol advertising and promotion are preferable.

Regarding other aspects of labelling beyond the provision of health warnings, such as providing ingredients lists and caloric and nutritional values, it is important to point out that consumers have a right to know what they consume and producers have an obligation to provide this kind of information. Still, alcohol has to date escaped the labelling regulations required either for psychoactive substances or for food in most countries of the WHO European Region (Hepworth et al., 2020; Jané-Llopis et al., 2020; Neufeld et al., 2020c).

In 2016, 22 of 52 Member States (42.3%) reported implementing health warnings on alcohol advertisements in the media and 13 (24.5%) reported health warnings on containers. However, the implementation of warnings appeared to be suboptimal. Of the 13 countries reporting health warnings on containers, only six reported specifying the label's size, and just three reported the use of mandatory text rotation. The situation had remained largely unchanged since 2012, when 21 Member States reported using health warnings on alcohol advertisements and 15 reported using warnings on containers.

In 2016 most Member States – 48 of 52, or 92.3% – reported alcohol content (i.e. percentage of pure alcohol) on labels, irrespective of the product type (Fig. 25). Less frequently, countries required basic consumer information, such as calories and nutritional information: 28.8% of countries required such information for wine and spirits, 25.0% required it for beer. Only three countries required that alcoholic beverage labels should indicate the number of standard drinks for that country on their container.



Fig. 25. Number of Member States requiring warnings and health-related information on labels, by label and beverage type (2016) (*n*=52)



A systematic search for alcohol labelling information across the WHO European Region as part of a synthesis report of the WHO Health Evidence Network revealed that, in 2019, the provision of alcohol labelling generally, and health warnings specifically, was not mandatory in many countries in the Region (Jané-Llopis et al., 2020; Neufeld et al., 2020c). Comprehensive approaches to alcohol labelling should stipulate inclusion of health information and ingredients and nutritional information on alcoholic beverage labels. The provision of health warnings should follow the examples of tobacco health warnings; the fact that alcohol is a carcinogen responsible for thousands of cancer cases and deaths every year in the Region is not sufficiently known by the public (WHO, 2020a), so cancerspecific health warnings should be considered by Member States as a means of increasing awareness of the risks associated with alcohol use.

5.2.4.2 Server training

Server training can facilitate the goals of SAFER policies that restrict availability by denying sale of alcohol to those under the legal age and those who are intoxicated (Babor et al., 2010). In 2016, 20 countries (38.5%) reported systematic use of alcohol server training – a small increase from 2012 (19 Member States, 35.8%). Server training is a form of occupational training provided to people serving alcohol, such as bar, restaurant and catering staff, which promotes safety through the prevention of intoxication and compliance with age limits.

5.2.5 Community action

5.2.5.1 Community and workplace interventions

People with alcohol problems and their families are part of communities. Their lived experience can help to inform strategies to prevent alcohol problems and to support recovery. The burden of harmful and hazardous alcohol consumption is felt at all levels of society, including in the community and workplaces (WHO, 2010). Community and workplace action can respond to such harms, including public disturbance and nuisance, and lost workplace productivity, including absenteeism, "presenteeism" and unemployment (WHO, 2010). Though not part of the SAFER initiative, workplace and community actions are aligned with SAFER interventions and can contribute to reductions in the public health burden of alcohol. For example, education programmes play an important role in changing social norms around consumption (WHO, 2010) and can improve public support for alcohol policies (Buykx et al., 2015). Workplace action can reduce accidents at work and costs to society (WHO, 2010). Effective community programmes can mobilize support for interventions known to be effective, such as drink–driving laws or enforcement of more severe restrictions.

In 2016 national guidelines for implementing effective community-based interventions were available in 23 of 51 Member States reporting data (45.1%), which represented a slight increase from 2012 (22 of 51 Member States, or 43.1%). Still, only half of Members States with existing national guidelines reported

coverage rates greater than 30%. However, 43 countries (84.3%) reported having community-based interventions or projects involving stakeholders.

Compared to community-based action, fewer Member States in 2016 reported that they had national guidelines for the prevention of alcohol problems and counselling at workplaces (22 of 52 Member States with data, equivalent to 42.3%). However, this represented a small increase from 2012 (18 of 51 Member States, or 35.3%).

5.2.5.2 School interventions

In 2016 there was a legal obligation to include alcohol prevention in the school curriculum in 39 of 51 Member States reporting data to WHO (76.5%). This represented a slight increase over 2012, when 37 of 51 Member States (72.5%) had such an obligation.

In 2016 only 24 of 52 Member States (46.2%) with available data had national guidelines relating to the prevention and reduction of alcohol-related harm in school settings; this represented a decrease from 28 of 51 Member States (54.9%) in 2012.



6. Changes in alcohol policy implementation in the WHO European Region (2016–2019)

6.1 Overview of alcohol policy implementation in 2016

As outlined above, the 10 composite policy score indicators represent each action area of the EAPA (WHO, 2012) and the Global Strategy to Reduce the Harmful Use of Alcohol (WHO, 2010) and are based on available research evidence and consistent and transparent scoring principles. They measure not only the existence of alcohol policies but also – as stricter regulations are given higher scores – their strictness and comprehensiveness.

One major advantage of such composite indicators representing different areas is their ability to convey at a glance a large amount of information that is relevant to decision-making and priority-setting by policy-makers. Another advantage is their capacity to quantify the completeness of national alcohol strategies and plans – to indicate the number of policies that have been implemented and the degree to which each meets certain prescribed standards. A third advantage is that they allow cross-country comparisons of alcohol policy implementation to be made, as well as comparisons over time.

The aggregate scores for the 10 EAPA policy areas in the WHO European Region in 2016 are shown in Fig. 26. The mean score for all 10 areas across the entire Region was 54, with a median of 59.

In 2016 the WHO European Region scored two thirds of the total possible policy score in only three areas: (1) drink–driving countermeasures; (2) leadership, awareness and commitment; and (3) actions to tackle informal and illicit alcohol.



^a n=51 Member States. ^b n=48 Member States. ^c 100% signifies perfect implementation.

Fig. 26. Average policy scores for the 10 EAPA action areas in the WHO European Region (2016)

The worst-performing policy area was pricing policies, in spite of the fact that they represent the most effective and cost-effective interventions and are therefore recognized as "best buy" measures to reduce the alcohol-attributable disease burden and form part of the SAFER package (WHO, 2018b, 2018c and 2019d). For instance, less than a third of countries (28.3%) reported adjusting the price of beer, wine or spirits for inflation, with the result that alcohol became increasingly affordable over time. The Region also performed poorly in implementing actions to reduce the harmful impact of drinking and intoxication, a policy area that includes server training and alcohol labelling. On average, the Region had low scores in the policy areas of community and workplace actions and health service responses, scoring less than 50% in both areas.

When looking at the regional distribution of EAPA scores, there are clear differences in alcohol policy implementation across countries, although regional patterns are not easy to identify (Fig. 27). For instance, while lower EAPA scores were observed in some central and eastern European countries, other eastern European countries had relatively high scores, with Belarus achieving the highest EAPA score of all in 2016. Also, higher scores were observed in the Baltic and Nordic countries and in south-western countries.

Fig. 27. Average policy scores for the 10 EAPA action areas, by country (2016)



Overall, 35 of the 53 countries reported average EAPA scores of at least 50%, but only two – Belarus and Portugal – reported scores of at least 75%.

However, the policy score analysis by country should be interpreted with caution, as the scores are based only on self-reporting of alcohol policy implementation; they are, necessarily, taken at face value and are highly dependent on how the technical focal points who submitted the survey data understood the questions and the assignment. Also, the scores do not take into account actual enforcement of policy measures, and – since the overall methodology is new – further calibration will be required in future to reveal meaningful differences across countries.

6.2 Partial 2019 update of alcohol policy implementation

In 2019 an update of some of the EAPA composite indicators was possible based on the most recent data for the WHO European Region from the 2019 WHO Global Survey on Progress on SDG Health Target 3.5 (WHO, 2020i). However, new data were not available for four areas - monitoring and surveillance, informal and illicit alcohol, community action and health system responses – and 2019 updates were not possible in these areas. With these limitations in mind, the differences in policy score between 2016 and 2019 were not large, and the broad pattern remained the same: pricing policies continued to be the worst-implemented policy area and drink-driving countermeasures continued to be the best (Fig. 28). There were improvements seen between 2016 and 2019 for one policy area (pricing), though there were also reductions in policy scores across three policy areas (reducing the negative consequences of alcohol, marketing, and leadership and awareness).



Fig. 28. Average

policy scores for the 10 EAPA action





Overall, by 2019 some very modest progress had been made by Member States in the areas of pricing policies, reducing the negative consequences of intoxication and alcohol marketing. This suggests that, overall, there was little or no progress made in implementing alcohol policies in the WHO European Region in the period 2016–2019. Also – and of particular concern – the overall rate of implementation in all 10 areas was just above the average of 55%, meaning that there is ample room for improvement, especially in the four areas that scored below 50%.

7. Conclusions: making the WHO European Region SAFER

Available evidence to date highlights the extent to which alcohol policies need to be intersectoral. In order to be effective and avoid unintended consequences, such policies must target not only individual drinkers but also the alcohol market, the entire alcohol supply chain, the drinking environment, and the broader social context and health system (Babor et al., 2010; WHO, 2010 and 2012). Although the present report documents overall decreases in levels of alcohol consumption (the key indicator for harm) for the WHO European Region between 2010 and 2016, these improvements were observed only in certain countries, mainly in the eastern part of the Region (Berdzuli et al., 2020; Neufeld et al., 2020a; Pärna, 2020; Probst et al., 2020; Stumbrys et al., 2020; WHO, 2019a). Recent forecasts suggest that overall alcohol consumption in the Region is set to remain close to current levels over the next decade, although it is likely that the global COVID-19 pandemic – at least in its early months – led to an overall decrease in alcohol use in the Region (Kilian et al., 2020; Manthey et al., 2020; Rehm et al., 2020).

In terms of alcohol policy implementation, the present report provides important insights into the extent to which the effective and cost-effective measures outlined in WHO's SAFER initiative have been implemented in the WHO European Region. In 2016, of the five SAFER key areas, only drink-driving countermeasures were well implemented in the WHO European Region, while implementation of other measures – those related to the WHO "best buys" (increasing taxes on alcohol, banning alcohol advertising and restricting the availability of alcohol) and health service responses (provision of screening and brief interventions for alcohol and treatment of alcohol use disorders) – was generally poor. Most worryingly, pricing measures – even though the evidence to date suggests that they are one of the most effective types of intervention – were the most poorly implemented across the Region in 2016. A snapshot of the overall policy implementation rates in 2019 shows that little or no progress has been made since that date. While there are various examples of higher tax rates being successfully introduced for both tobacco products and sugar-sweetened beverages in the Region, Member States have so far been hesitant to substantially raise alcohol taxes - with a few notable exceptions in eastern Europe and central Asia (Neufeld et al., 2020a; WHO, 2020d). The result of this is that – when rising rates of inflation and average household incomes are taken into account - alcoholic beverages have become increasingly affordable in the WHO European Region over recent decades. For this reason, more action in the area of pricing is called for, and additional measures beyond taxation, such as setting minimum prices for alcohol, should be considered by Member States.

It is still too early to gauge the long-term impact of COVID-19 on people's drinking patterns. Nevertheless, it is clear that an increase in alcohol consumption could



be caused by rising levels of anxiety and other mental health problems related to stress and changed and insecure work contexts, as well as by the overall impact on well-being and lifestyles of measures such as self-isolation, physical distancing and lockdowns (WHO, 2020b). The changed social contexts could also bring risks to other vulnerable population groups, including children and other family members who may be at greater risk of harms such as alcohol-related domestic violence. At the same time, commercial operators, taking advantage of the difficult economic circumstances, are making the case for less, not more, regulation of alcohol. The available evidence strongly opposes the notion that economies can recover while neglecting the health of their populations through inadequate regulation of alcohol (Babor et al., 2010; Baumberg, 2006; Lee & Forsythe, 2011; Rehm et al., 2009). On the contrary, the SAFER initiative underlines that a healthy economy is driven by a healthy population and that to improve the health of all Europeans we need a reinvigorated commitment to tackling all causes of preventable ill health, including alcohol (Commission on Alcohol Harm, 2020).

WHO's European Programme of Work 2020–2025 envisages a world where the vulnerable are protected, no one is left behind, and people are enabled to live safer, healthier and better lives (WHO, 2020e). The SAFER initiative provides an opportunity to transform the WHO European Region into a region where more people live healthier and safer lives through the implementation of the strongest and most cost-effective strategies to reduce alcohol-attributable harm: measures such as taxation and alcohol price increases that reduce the affordability of alcohol; restrictions on the physical availability of alcohol and on alcohol marketing; drink–driving countermeasures; and brief interventions for at-risk drinkers and treatment of individuals with alcohol use disorders.

Finally, this report underlines the SAFER initiative's usefulness and importance in supporting implementation of effective and cost-effective alcohol policies with monitoring and evaluation mechanisms, allowing them to adapt to changing needs without interference from industry and commercial interests. As we have seen, the WHO European Region can be a "first mover" in responding to the harm that stems from alcohol and putting policy measures in place to tackle it, tailoring them to the needs of vulnerable groups and to local contexts and available resources, while supporting the global agenda and moving it forward. Looking back at the work of public health agencies and professionals and WHO's contribution to reducing alcohol consumption and alcohol-attributable harm both globally and in the WHO European Region, it is clear that much has already been done in response to the enormous disease burden stemming from alcohol (a burden that is greatest in the European Region). As most of the major international alcohol producers are located in the WHO European Region and are increasingly extending their markets to lower- and middle-income countries in Asia, South America and Africa whose populations do not traditionally drink alcohol, it is also clear that increased funding and innovative ideas and strategies are needed to protect public health and prevent alcohol-attributable harm both in the Region and elsewhere.

Looking forward, this review inspires us to recommit to a SAFER WHO European Region where no people and no groups are left behind in our efforts to protect individuals, communities and societies from the health and social harms caused by alcohol, as well as from its damaging socioeconomic impact.





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Annex 1. Composition of total alcohol per capita consumption (15+ years) by country, 2010 and 2016

Fig. A1. Distribution of total alcohol per capita consumption (15+ years) in terms of recorded and unrecorded alcohol adjusted for tourist consumption, in litres of pure alcohol, by country (2010 and 2016)^a



^a The coloured bars show the proportions of recorded (blue) and unrecorded (orange) alcohol adjusted for tourist consumption (green). Estimates of tourist consumption are based on: the number of tourists who visited a country; the average amount of time they spent in the country; how much these people drink on average in their countries of origin; and the assumptions (1) that people drink the same amount of alcohol as tourists as they do in their home countries and (2) that global tourist consumption is equal to 0 (and hence that tourist consumption can be net negative or net positive).







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