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Alcohol – Wide-Ranging Problems, Inadequate Responses

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A. Introduction

Alcohol is greatly valued, deeply integrated into social and cultural contexts, used extensively, or its consumption banned or distribution strongly controlled-- depending on the era and socio-cultural contexts. In many western countries it is currently a very popular drug, with 70-80% of adults having consumed alcohol in the past year. In many countries, on the other hand, its use is uncommon, with dramatic differences in prevalence and average consumption between men and women (WHO, 2014).

The recent alcohol experience differs substantially from that with tobacco, where increasingly accessible smoking cessation programs and strengthened control initiatives have been implemented in many countries in the past decades, and prevalence of tobacco users has declined to 15-20% in many countries. In contrast, the prevalence of alcohol use is increasing, particularly in countries with low rates of use, and tends to be associated with, among other factors, an increase in average income (Schmidt et al., 2010). With some noteworthy exceptions, there are both ongoing social and political pressures to increase access to alcohol. Furthermore, outside specialist circles alcohol is typically not considered a drug.

Nevertheless, when the range of trauma and chronic disease is taken into account the burden from alcohol is only marginally less than that associated with tobacco in many countries, and even greater in some South American countries (Lim et al., 2012). And such an accounting does not include the wide range of social harms from drinking (Klingemann & Gmel, 2001). Furthermore, the harm from alcohol is substantially greater than that from illicit drugs in most contexts, although resources typically devoted to prevent or manage the latter are typically far greater than for alcohol. Even when the impact of high prevalence of alcohol use is set aside, and psychoactive substances are compared in terms of their intrinsic harmfulness, alcohol is commonly evaluated as among the most harmful of drugs – though such scientific evaluations have often proved politically unpalatable (Room, 2007; Nutt et al., 2010).

This chapter elaborates on several of these themes. The next section discusses the various use-values of alcohol, including for intoxication, socialization, meal enhancement and others. It also provides an overview of typologies of different drinking patterns.

In the third section the range of alcohol-related problems is discussed, including harms not only to the drinker, but also to others who are victims of alcohol-related events, such as drinking and driving incidents, alcohol-related violence or dealing with family members with chronic alcohol-related problems. This section also discusses emerging international attention to several issues, including alcohol as a carcinogen and the association between alcohol use and social determinants of health.

Societal responses to alcohol use and problems are highlighted in the fourth section. There are on-going initiatives, programs and policies to control the harm from alcohol. Unfortunately many of the popular and prevalent ones are not the most effective, those shown to be more effective are typically not that popular. This section also focuses on trends detrimental to public health – increased access to alcohol and alcohol marketing. These are complementary aspects of ongoing efforts to expand the networks of users in many contexts, increase sales, or shift brand or beverage preferences. It also notes how trade agreements tend to block or confound best public health responses rather than reduce potential harm from alcohol.

The final section address several challenges: how to promote a public health response in the context of easy access to alcohol and governmental interest only in modest controls; the currently marginal role of nongovernmental organizations such as heart and cancer societies in alcohol issues – in contrast to their active involvement in tobacco control and obesity reduction; and alcohol industry involvement in alcohol policy, including seeking to have a role in ‘prevention’ especially in low income countries.

An underlying theme of this chapter is that the full scope of the harm from alcohol is under-estimated and even ignored by governments and health agencies, although evidence has been accumulating for decades. Furthermore, with industry initiatives to promote sales in lower income countries, many with large populations, and current high rates of consumption in others, it is expected on balance that the problems will increase in coming years. The challenge is to draw attention to this situation and find and implement nuanced responses to the situation that will reduce the harm from alcohol.

B. Drinking Patterns and Use-Values of Alcohol

Alcoholic beverages have many intrinsic properties which make them useful to humans. Apart from being used as a fuel and as a solvent, alcohol has several use-values when consumed (Mäkelä, 1983). There is a long history of use of alcoholic beverages as medicine, and as a nutrient – for instance, opaque beer is used for nourishment in many traditional African cultures (Nout, 2009). And, of course, alcohol is also used as a psychoactive

substance that affects mood, and as an intoxicant. Besides the inherent properties, there are also broad symbolic meanings attached to the consumption of alcohol, as in its use as a Christian sacrament, or in ceremonial toasts, or in symbolic exchanges (e.g., Bartlett, 1980). But though alcohol may be consumed for one particular use-value, its other intrinsic properties, and often some symbolic ones as well, are also in effect. In particular, its most problematic properties – its intoxicating effects and causal roles in chronic disease – often accompany the pleasure and other positive effects sought by the drinker.

At the cultural and societal level, drinking practices and the cultural position of alcohol vary greatly. In Islamic societies, at one end of the spectrum, it is forbidden outright. Even where drinking is accepted, a large proportion of adults may not be drinkers. Contrary to the ubiquity of drinking in many rich societies and in media and advertising, about half of the adults in the world today are abstainers (WHO, 2014). In some societies, alcohol use is primarily associated with intoxication, while in others drinking is common but intoxication is strongly disapproved and rare. The dimension of how much of the drinking is to intoxication is captured by WHO's "patterns of drinking score" (WHO, 2014:35).

One key dimension for describing the cultural position of drinking is thus the extent to which drinking in the society is to intoxication. Particularly where much of the drinking is to intoxication, children are often not given access to alcohol, and in many traditional societies drinking by women is also quite rare. A second dimension is the regularity of drinking (Room & Mäkelä, 2000). To what extent are drinking and heavy drinking reserved for particular social categories and circumstances, and how do they relate to the culture: as carriers of high prestige or of low? Is drinking hidden from daily and family life, entrenched within it, or not clearly differentiated from it? The dimension of regularity of use plays a substantial role in determining the overall level of alcohol consumption in the society.

Drinking customs present an intermediate level of analysis between cultures and individual patterns of drinking (Room et al., 2002). Some drinking customs are intangible, part of everyday sociability; for instance, the custom in many cultures of informal 'toasting' -- making a gesture or speaking some verbal formula as an invitation to drink together. Others take on, or are associated with, institutional forms: in many cultures, there are taverns or other places where people gather to drink, with recognizable spatial and architectural arrangements that are typical in the cultural setting. Three kinds of drinking custom can be described which are very widespread, but which take on diverse typical forms in different cultures: (i) the drinking group and reciprocity customs within it; (ii) communal celebrations; and (iii) the pub or on-premises drinking shop (Room, 2013).

C. Alcohol-Related Problems

While the range of population-based alcohol-related problems is extensive, there are variations related to drinking levels, patterns and socio-cultural dynamics of drinking – as discussed below. Alcohol is a contributing cause of over 60 diseases and conditions, both chronic and acute. As noted by Babor et al. (2010; pg 49), there are several major alcohol-

related health conditions contributing to morbidity and mortality, including: cancers, neuropsychiatric conditions, diabetes, cardiovascular conditions, gastrointestinal conditions, infectious diseases, maternal and prenatal conditions, acute toxic effects, accidents, self-inflicted injuries, and violent incidents.

Some diseases typically require a number of years of drinking at elevated frequency and quantity in order for the condition to become evident; for other conditions, incidents of heavy episodic drinking may be the most proximal stimulus of the problem. Those who drink frequently and in large quantities are thus likely to have elevated risk of both chronic and acute problems related to alcohol consumption, compared with those who drink infrequently and low volumes per occasion.

There appear also to be health benefits from regular light consumption, for instance of a drink every second day, mainly for middle-aged adults and mainly limited to some cardiovascular diseases and type two diabetes. However, at a population level the benefits are far outweighed by the health harms (Skog, 1996; Lim et al., 2012), and there is increasing evidence that much or all of the apparent benefits reflect problems of measurement and confounding in epidemiological studies (Chikritzhs et al., 2009; Holmes & Dale, 2014).

While there is widespread awareness of alcoholism or alcohol dependence as a consequence of alcohol use, there is much less attention to other chronic adverse effects. But while those who qualify as alcohol dependent typically experience more health problems than do other drinkers, a substantial share of the burden also comes from other drinkers, who regularly drink quite a lot without being dependent, or who drink sporadically at risky levels. The harm to themselves of the individuals in this group is likely to be less on average per person, but because there are many more of them in a population than persons considered to be dependent on alcohol, the accumulated harm is greater to society. This is further justification, as discussed below, for population-level alcohol policies, since they have a beneficial impact not only on those dependent on alcohol, but also on those, often representing a large sector of a population, who occasionally drink to excess, and may also prevent the onset of heavy drinking.

Table 1 about here

	Developing Countries						Developed countries				World	
	Very high or high mortality; lowest consumption		Very high or high mortality; low consumption		Low mortality		Very low mortality		Former Socialist: low mortality			
	Islamic middle East and Indian subcontinent		Poorest countries in Africa and America		Better-off developing countries in America, Asia, Pacific		North America, Western Europe, Japan, Australasia		Eastern Europe and Central Asia			
	DALYs	%	DALYs	%	DALYs	%	DALYs	%	DALYs	%	DALYs	%
Perinatal conditions	29	0.5%	48	0.7%	29	0.1%	6	0.1%	11	0.1%	123	0.2%
Malignant neoplasms	154	2.6%	502	7.0%	2321	9.1%	828	10.5%	395	3.4%	4200	7.2%
Neuro-psychiatric conditions in total	1780	29.8%	1692	23.5%	10142	39.7%	5697	72.1%	2591	22.1%	21902	37.6%
Only alcohol use disorders (also part of neuro-psychiatric disorders)	1578	26.4%	1328	18.5%	2906	36.7	5100	64.6%	2299	19.6%	19671	33.7%
Cardiovascular diseases	899	15.1%	442	6.1%	2260	8.9%	-1548	-19.6%	1931	16.4%	3984	6.8%
Other non-communicable diseases	303	5.1%	594	8.3%	1864	7.3%	787	10.0%	1010	8.6%	4558	7.8%
Unintentional injuries	2293	38.4%	2740	38.1%	5961	23.4%	1571	19.9%	3929	33.5%	16494	28.3%
Intentional injuries	506	8.5%	1183	16.4%	2940	11.5%	558	7.1%	1874	16.0%	7061	12.1%
Total alcohol related burden in DALYs	5966	100.0%	7199	100.0%	25519	100%	7897	100%	11742	100%	58323	100%
Total alcohol related burden in DALYs per 1000 adults	6.99		18.70		15.54		11.75		36.48			
Total burden of disease in DALYs	458601		364117		409688		115853		96911		1445169	
% of total disease burden which is alcohol related	1.3%		2.0%		6.2%		6.8%		12.1%		4.0%	

Table 1. Economic development and alcohol-attributable disease burden in 2000 (in 1,000 DALYs; Rehm et al., 2004)

Table 1 shows an estimate of the global disease burden from alcohol for the world and for regional groupings of countries on the basis of level of national income level and (among the developing countries) alcohol consumption level. It will be seen that, in terms of absolute numbers of disability-adjusted life-years (DALYs) lost, the greatest adverse effect of alcohol is in lower-mortality developing countries (i.e., middle-income countries), and in developed countries – particularly in eastern Europe and central Asia. As a proportion of the total disease burden, alcohol's share is highest in eastern Europe and central Asia, but also above the world average in middle- and high-income countries. Everywhere, though less in high-income countries, alcohol-related injuries are a substantial part of the alcohol burden. The importance of alcohol as a risk factor for noncommunicable diseases is illustrated by the substantial parts of the alcohol burden from cancers, cardiovascular diseases, and other non-communicable diseases – over 20% of the alcohol burden globally. The table does not include estimates of alcohol's substantial impact on infectious diseases, since the quantitative literature needed for this is still developing (Parry et al., 2009).

Some alcohol-related trauma and social problems may be more visible and thus draw attention of the media, policy-makers and sectors of the general public. Especially in higher income countries there has been substantial attention to alcohol-related incidents involving motor vehicles over the last half-century. In a number of such countries, a combination of policies and interventions, detection methods, public support, victims' organizations, media advocacy and changes in vehicle and road designs have contributed to a dramatic reduction in rates of injury and death (e.g., Transportation Research Board, 2010). In other jurisdictions with greater risks inherent in road design, increase in alcohol consumption and growing use of motor vehicles, one might expect that drinking and driving incidents, including risks to pedestrians – both sober and intoxicated -- are likely to increase (WHO, 2004).

Alcohol is also involved in disruptions in the workplace, public domain and private context. As noted in the next sections, it may be marginally less challenging to implement policies that bear on the first two domains than on the third. Both the drinker and others are often impacted by alcohol use in these contexts.

In recent years there has emerged a more systematic approach in several countries on how alcohol use negatively impacts not only the drinker but also strangers, work associates, friends and family. These issues have been known for some time with regard to drinking and driving and impact of alcohol on maternal and prenatal conditions, as well as alcohol-related violence and public disruption. Recent and ongoing research on 'harm to others' from alcohol has deepened and expanded the focus – including the impact on others from management and care of those with alcohol-related chronic disease, the impact on children and youth with a heavy-drinking family member, and estimates of costs related to social welfare, police and health care systems. (Room 2000, 2011; Room et al. 2010; Laslett et al. 2010, 2011, 2012; Dale & Livingston, 2010; Navarro et al. 2011; Giesbrecht et al. 2010). A current World Health Organization project will expand knowledge in this area to include a number of low- and middle-income countries (WHO, 2014:16).

D. Societal Response: interactive reactions, popular movements, regulations and institutional policies

As indicated already, intoxication and recurrent heavy drinking can be problematic in many ways for those around the drinker, and societies and cultures respond in many ways in efforts to limit or prevent the problems. One level of response is informal, in terms of those around and often directly affected by the drinker (e.g., Dietze et al., 2013; HradilovaSelin et al., 2009).

In many cultures and times, there have been more collective responses to reduce problems of alcohol in the society. Islam is not the only world religion which has reacted against problematic drinking: there are strands and movement also in Buddhism, Christianity and other religious traditions which have taught and acted against drinking and its associated problems (Room, 2013b). In current developing societies, there have been many spontaneous grassroots movements to counter serious alcohol problems in the community, often led by local women (e.g., Room et al., 2002:205, 211, 213).

In the 19th century and first half of the 20th, there was a substantial international movement to counter alcohol problems, which became known as the temperance movement. In its grassroots form, it emerged first among working-class men in English-speaking countries (e.g., Harrison, 1971), but quickly spread in northern Europe and eventually much more widely (Tyrrell, 1991). Initially, the movement operated on a mutual-help basis, where people helped each other to keep their pledges to give up spirits or all alcoholic beverages. Operating in this fashion, the initial waves of temperance in the US reduced alcohol consumption by one-half in the course of ten years (Rorabaugh, 1981). Temperance movements among the disempowered, as part of consciousness- and nation-building impulses, helped to bring sweeping social change in diverse places (Sulkunen, 1990; Herd, 1985).

In later phases of the temperance era, the emphasis switched to coercive change, seeking prohibition of alcohol sales, and in fact 13 countries did have periods of prohibition in the first decades of the 20th century (Schrader, 2010). In a dialectical response to pressure from the temperance movement, politicians and governments responded to the movement with new legislation imposing various forms of control on the alcohol market and on alcohol availability. In the state of Victoria in Australia, for instance, the official Liquor License Reduction Board bought out and closed half of the pubs -- those seen as most problematic -- in the first years of the 20th century (Room, in press). Sweden imposed the Bratt system, a strict form of alcohol control, including individual rationing, as a harm-reduction alternative to prohibiting alcohol (Frånberg, 1987). These and other initiatives in regulatory control “from above” could not have happened without the impetus of popular movements pressing for change from below.

To a greater or lesser extent in societies where temperance had been strong, succeeding generations reacted against it (e.g., Room, 20010). Particularly in Anglophone and Nordic

societies, the cultural politics of alcohol issues today still reflects this reaction, often making it difficult to implement adequate societal responses to health and welfare problems from alcohol.

In the remainder of this section, we give an overview of the evidence on different strategies and tools for reducing rates of alcohol-related harm, whether by reducing or shaping drinking or by insulating the drinking from harm.

By and large, these strategies and tools are “top down”, operating through societal institutions and the professions which staff them or through government regulation and enforcement. The strategies and tools which are noted are generally chosen for discussion because there is evidence they can be effective. But many of the strategies are not widely implemented. This is where grassroots organizing constitutes a necessary piece of the puzzle. Popular support is needed to keep such strategies and tools in effect, and often political organization and pressure is needed for them to be implemented in the first place. Affecting as it does many vested economic interests and the fabric of many people’s daily life, alcohol policymaking is not simply a technocratic exercise to be implemented by experts, but a field of social conflict where action in the interest of public health and safety often requires popular attention and pressure.

There are a number of resources to inform a societal response to alcohol-related harm. Babor et al. 2010 -- based on extensive review of the evaluation literature by 15 international experts -- identified 11 best practices. Anderson et al. 2009 examined 35 interventions and policies, in 9 groups in terms of evidence of effect and level of evidence. There is also a paper by Giesbrecht and colleagues (2011) and the position paper by on alcohol by the Canadian Public Health Association (2011). The latter two recommend eight alcohol policy dimensions or strategies organized into two groups: population-based policies and interventions, and targeted policies and interventions.

The following text is based on the Global Strategy for Alcohol by the World Health Organization (2010), and also draws on Giesbrecht et al. (2013), and Monteiro et al. (2013) as well as the resources cited in the text below. Table 2, organized according to the ten areas in World Health Organization (2010). outlines recommended alcohol policies and prevention strategies drawing on four sources (WHO 2010; Anderson et al. 2009; Babor et al. 2010; CPHA 2011).

Table 2 about here

Table 2: Summary of Recommended Alcohol Policies & Prevention Strategies from Four Sources

World Health Organization, 2010	Anderson et al. 2009¹	Babor et al. 2010²	Canadian Public Health Association 2011
1. Leadership, awareness & commitment a. create national or sub-national strategies; b. establish or appoint a main institution; c. coordinate strategies with other sectors; d. insure wide access to information about full range of alcohol-related harms; e. raise awareness about harm to others and among vulnerable populations.			Knowledge exchange and skills building CPHA calls on the public health community to build capacity to respond to alcohol as a public health issue by: <ul style="list-style-type: none"> • creating a community of practice in the CPHA Knowledge CentreTM to support knowledge exchange; • working together to build the capacity of health workers by developing alcohol prevention/control continuing learning opportunities for both public health and other health professionals. CPHA calls on post-secondary educational institutions to include comprehensive information on both the population and individual impacts of harmful patterns of alcohol use in the core curricula of their undergraduate health programs, and expand the training on alcohol issues in medicine and nursing programs, as well as graduate public health programs.
2. Health service response a. build capacity to deliver prevention and care; b. support screening and brief intervention; c. improve capacity to detection of FASD; d. coordinate prevention, treatment and care; e. supply universal access of affordable treatment for low SES groups; f. maintain system to register and monitor alcohol-attributable mortality and morbidity with reporting mechanisms;	Brief advice; Cognitive behavioural therapies for alcohol dependence; Benzodiazepines for alcohol withdrawal; Glutamate inhibitors	Brief intervention with at-risk drinkers; Mutual self-help attendance; Medical and social detoxification; Talk therapies	Increasing access to screening and brief interventions: <ul style="list-style-type: none"> • increase capacity for screening and brief intervention for problem drinking in both primary health care and emergency room settings; • increase capacity for screening and counselling women of childbearing age and pregnant women according to SOGC guidelines. • ensure adequate capacity for community-based and inpatient treatment for both harmful drinking and

¹ Only included those assessed as “1” and “2” in Table 1 according to Anderson et al. (2009)

² Only included those with ++ or +++ for effectiveness and cross-cultural testing in Table 16. 1 according to Babor et al. (2010)

g. provide culturally sensitive health and social services as appropriate.	for alcohol dependence; Opiate antagonists for alcohol dependence		alcohol addiction.
3. Community action a. guarantee rapid assessments to identify gaps and priority areas; b. support recognition of alcohol-related harm at the local level and cost-effective responses to them; c. strengthen capacity at the local level; d. provide information about effective community-based interventions, and build capacity for their implementation; e. mobilize communities to prevent selling of alcohol to under-age youth; f. provide community care and support for affected individuals; g. support community programs and policies for subpopulations at particular risk.	Work place policies		
4. Drinking & driving policies and countermeasures a. introduce and enforce an upper limit for blood alcohol concentration, with a reduced limit for professional drivers and young or novice drivers; b. promote sobriety check points and random breath-testing; c. introduce administrative suspension of driving licenses; d. introduce graduated licensing for novice drivers with zero-tolerance for drink-driving; e. introduce using an ignition interlock, in specific contexts where affordable, to reduce	Introduction and/or reduction of alcohol concentration in the blood; Sobriety check-points and unrestricted (random) breath testing; Restrictions on young or inexperienced drivers (e.g. lower concentration of	Sobriety check points; Random breath testing; Lower Blood Alcohol Concentration limits; Administrative licence suspension; Lower BAC for young drivers; Graduated licensing for novice drivers	Federal government should consider: <ul style="list-style-type: none"> requesting Transport Canada to study the possibility of including alcohol ignition interlock device or the emerging technology of Driver Alcohol Detection System for Safety (DADSS) in the safety standards governing the manufacturing of road vehicles sold in Canada. Provincial/territorial governments should consider: <ul style="list-style-type: none"> changing motor vehicle acts to implement and/or increase the length of administrative sanctions (i.e., immediate road side suspensions) for drivers whose blood alcohol level is between .05 and .08. requesting that public prosecutors be more severe in their recommendations to the courts regarding

<p>drink-driving incidents;</p> <p>f. introduce mandatory driver-education, counseling and, as appropriate, treatment programs;</p> <p>g. encourage provision of alternative transportation, including public transport until after closing time for drinking places; h. conduct public awareness and information campaigns in support of policy and in order to increase the general deterrence effect;</p> <p>i. run carefully planned, high-intensity, well-executed mass media campaigns targeted at specific situations, such as holiday seasons, or audiences such as young people.</p>	<p>alcohol in blood for novice drivers);</p> <p>Mandatory treatment;</p> <p>Alcohol locks</p>		<p>sentences that apply to repeat offenders. increasing sobriety check points and investing in building the knowledge and skills about impaired driving enforcement tactics among front-line police staff.</p> <ul style="list-style-type: none"> • implementing effective social marketing and media campaigns to assist in increasing public awareness and visibility of the sobriety checkpoints. • developing and implementing strengthened graduated licensing for novice drivers in provinces/territories. Restrictions should apply to any new driver obtaining a license, where BAC must be 0.0 when driving or teaching a learner how to drive, for a period of five years after obtaining one's license. • implementing offender-pay alcohol ignition interlock programs for individuals found guilty of impaired driving.
<p>5. Availability of alcohol</p> <p>a. establish, operate and enforce an appropriate system to regulate production, wholesaling and serving of alcoholic beverages that places reasonable limitations on the distribution of alcohol and the operation of alcohol outlets in accordance with cultural norms, by the following possible measures:</p> <p>(i) introduce, where appropriate, a licensing system on retail sales, or public health oriented government monopolies; (ii) regulate the number and location of on- and off-premise alcohol outlets;</p> <p>(iii) regulate days and hours of retail sales;</p> <p>(iv) regulate modes of retail sales of alcohol;</p> <p>(v) regulate retail sales in certain places or during special events;</p> <p>b establish an appropriate minimum age for</p>	<p>Government monopolies;</p> <p>Minimum purchase age;</p> <p>Outlet density;</p> <p>Days and hours of sale</p>	<p>Ban on sales can reduce harm but with likely negative side-effects;</p> <p>Minimum legal purchase age;</p> <p>Rationing;</p> <p>Government monopoly on retail sales;</p> <p>Hours and days restrictions;</p> <p>Restrictions on density of outlets;</p> <p>Different availability by alcohol strength</p>	<p>CPHA calls on provincial and territorial governments to reduce the physical availability of alcohol. Evidence-based and promising interventions include:</p> <ul style="list-style-type: none"> • undertaking a thorough review of retail outlet numbers and density, and of hours of operation for licensed establishments, with the protection of public health and public safety being a key objective of the review. There should also be a moratorium on new retail outlets and on increases in hours of operation until these reviews are completed. • not permitting the sale of alcohol in convenience stores. Jurisdictions where such sales are already allowed should not permit further expansion of such sales. • maintaining the legal age for alcohol use at 19 years of age or considering increasing the legal age for alcohol use to 19 years of age in provinces/territories where it is currently 18. • ensuring compliance with the legal age for the

purchase or consumption of alcoholic beverages and other policies to raise barriers against sales to, and consumption of alcoholic beverages by, adolescents.			purchase of alcohol with a valid piece of personal identification; for example, British Columbia is now requiring two pieces of personal identification and Nova Scotia is implementing electronic identification verification systems.
6. Marketing of alcoholic beverages a. set up regulatory or co-regulatory frameworks, preferably with a legislative basis, and supported when appropriate by self-regulatory measures, for alcohol marketing by: (i) regulating the content and volume of marketing; (ii) regulating direct or indirect marketing in certain or all media; (iii) regulating sponsorship activities that promote alcoholic beverages; (iv) restricting or banning promotions in connection with activities targeting young people; b. develop by public agencies or independent bodies of effective systems of surveillance of marketing of alcohol products; c. set up effective administration and deterrence systems for infringements on marketing restrictions.	Controlling volume of advertising;	Legal restrictions on exposure	CPHA calls on all three levels of government to restrict alcohol marketing and sponsorship. This can be achieved by: <ul style="list-style-type: none"> • restricting alcohol advertising, promotion and sponsorship incrementally, with the ultimate goal to be restrictions similar to those currently in place for tobacco products. • regulating all forms of alcohol marketing, for instance the use of the Internet and social media promotions and product placement. • exploring legal options for provincial/territorial restrictions on alcohol advertising, promotion and sponsorship, including strengthening existing provincial regulations on advertising by licensed establishments (e.g., allowing advertising of drink specials and happy hours inside the venue only).
7. Alcohol pricing policies a. establish a system for domestic taxation on alcohol accompanied by an effective enforcement system, which may take into account, as appropriate, the alcoholic content of the beverage; b. regularly review prices in relation to level of inflation and income; c. ban or restrict the use of direct and indirect	Alcohol taxes	Increase taxes to reduce alcohol consumption	CPHA calls on the federal, provincial and territorial governments to take action to implement alcohol pricing strategies to reduce the burden of alcohol-related harms. The federal government should: <ul style="list-style-type: none"> • Adjust federal excise duties on all alcohol products to the Consumer Price Index and apply federal excise duties based on alcohol content so that taxes would increase proportionally as alcohol content

<p>price promotions, discount sales, sales below cost and flat rates for unlimited drinking or other types of volume sales;</p> <p>d. establish minimum prices for alcohol where applicable;</p> <p>e. provide price incentives for non-alcoholic drinks;</p> <p>f. reduce or stop subsidies to economic operators in the area of alcohol.</p>			<p>increases.</p> <p>Provincial/territorial governments should:</p> <ul style="list-style-type: none"> • establish a system of alcohol pricing based on the percentage of absolute alcohol in a standard drink such that the higher the alcohol content, the higher the price. This pricing system should be indexed annually to the Consumer Price Index to keep alcohol from becoming cheaper relative to other goods in the marketplace. • establish a minimum reference price for retail sales (e.g.: minimum of \$1.50 per standard unit drink) and a minimum reference price for licensed establishments (e.g.: minimum of \$3.00 per standard unit drink). Reference prices should be adjusted periodically to the Consumer Price Index. • ensure that pricing at establishments such as U-Brew and U-Vin are consistent with the retail minimum reference price. • establish a provincial surtax on alcoholic beverages that are disproportionately consumed by youth (e.g., alcoholic beverages with high sugar content and artificial flavouring, large-volume beer containers).
<p>8. Reducing negative consequences</p> <p>a. regulate the drinking context in order to minimize violence and disruptive behavior, including serving alcohol in plastic containers or shatter-proof glasses and management of alcohol-related issues at large-scale public events;</p> <p>b. enforce laws against serving to intoxication and legal liability for consequences of harm resulting from intoxication caused by the serving of alcohol;</p> <p>c. enact management policies relating to</p>		<p>Staff and management training to better handle aggression;</p> <p>Enhanced enforcement of on-premise laws and legal requirements</p>	<p>CPHA calls on provincial and territorial governments to enhance alcohol control systems based on preeminent public health and public safety interests by:</p> <ul style="list-style-type: none"> • maintaining present government control on the sale of alcoholic beverages. • supporting liquor authorities to take a more balanced approach between financial incentives and public health and public safety considerations. <p>CPHA calls on the provincial and territorial governments to change the drinking context by:</p> <ul style="list-style-type: none"> • adopting risk based licensing for licensed establishments.

<p>responsible serving of beverages on premises and train staff in relevant sectors in how to better prevent, identify and manage aggressive drinkers;</p> <p>d. reduce the alcoholic strength inside different beverage categories;</p> <p>e. provide necessary care or shelter for severely intoxicated people;</p> <p>f. provide consumer information about, and label alcoholic beverages to indicate, the harm related to alcohol.</p>			<ul style="list-style-type: none"> • ensuring that their alcohol regulatory authorities have appropriate capacity for adequate active enforcement compliance checks of on-premise laws, over-service and minimum age restrictions, along with strengthened and more timely sanctions for non-compliance by operators. • ensuring that their jurisdiction has an evidence-based bar safety and responsible service training program and that this training is conducted by government or third-party agencies. • requiring training of owners, managers and staff as a condition of licensing/re-licensing. Frequency of re-licensing should be guided by evidenced-based best practices and risk assessment of the establishment type. In addition, there should be mandatory re-licensing for owners, managers, and staff of licensed establishments that have failed inspections and/or received notifications of regulatory violations.
<p>9.Reducing public health impact of illicit and informally produced alcohol</p> <p>a. introduce a good quality control with regard to production and distribution of alcoholic beverages;</p> <p>b. regulate sales of informally produced alcohol and bringing it into the taxation system;</p> <p>c. introduce an efficient control and enforcement system, including tax stamps; d. develop or strengthen tracking and tracing systems for illicit alcohol;</p> <p>e. ensure necessary cooperation and exchange of relevant information on combating illicit alcohol among authorities at national and international levels;</p> <p>f. issue relevant public warnings about contaminants and other health threats from</p>			

informal or illicit alcohol.			
<p>10 .Monitoring & surveillance</p> <p>a. establish effective frameworks for monitoring and surveillance activities including periodic national surveys on alcohol consumption and alcohol-related harm and a plan for exchange and dissemination of information;</p> <p>b. establish or designate an institution or other organizational entity responsible for collecting, collating, analyzing and disseminating available data, including publishing national reports;</p> <p>c. define and track a common set of indicators of harmful use of alcohol and of policy responses and interventions to prevent and reduce such use;</p> <p>d. create a repository of data at the country level based on internationally agreed indicators and report data in agreed format to WHO and other relevant organizations;</p> <p>e. develop evaluation mechanisms with the collected data in order to determine the impact of policy measures, interventions and programs put in place to reduce the harmful use of alcohol.</p>			<p>CPHA calls on federal and provincial/territorial governments to:</p> <ul style="list-style-type: none"> • increase their emphasis on continuing the development of a comprehensive and sustainable epidemiological surveillance system at federal/provincial/territorial levels, for major changes in access to alcohol, alcohol consumption patterns, and alcohol-related disease, injury and social outcomes and economic costs; • increase their support of alcohol research and knowledge exchange activities in order to develop, disseminate and implement evidence-based strategies to reduce alcohol-related harms.

1. Leadership, Awareness and Commitment

Sustainable action requires strong leadership and a solid base of awareness and political will and commitment. The commitment should ideally be expressed through adequately funded comprehensive and intersectoral national policies that clarify the contributions, and division of responsibility, of the different partners involved. The policies must be based on available evidence and tailored to local circumstances, with clear objectives, strategies and targets. The policy should be accompanied by a specific action plan and supported by effective and sustainable implementation and evaluation mechanisms. As noted above, the appropriate engagement of civil society is essential.

The following policy options and interventions are recommended in the WHO (2010) document: a. create national or sub-national strategies; b. establish or appoint a main institution; c. coordinate strategies with other sectors; d. insure wide access to information about full range of alcohol-related harms; and, e. raise awareness about harm to others and among vulnerable populations.

2. Health Services Response

Health services are central to tackling harm at the individual level among those with alcohol-use disorders and other health conditions caused by harmful use of alcohol. Health services should provide prevention and treatment interventions to individuals and families at risk of or affected by alcohol-use disorders and associated conditions. An important role of health services and health professionals is to inform societies about the public health and social consequences of harmful use of alcohol, support communities in their efforts to reduce the harmful use of alcohol, and to advocate effective societal responses. Health services should reach out to, mobilize and involve a broad range of players outside the health sector. Health services response should be sufficiently strengthened and funded in a way that is commensurate with the magnitude of the public health problems caused by harmful use of alcohol.

The cumulative evidence from several hundred empirical studies, meta-analyses and systematic reviews, is that the use of screening, brief interventions and referrals (SBIR) in health care settings is an effective method for reducing alcohol consumption and associated problems, particularly those with early stage or less severe alcohol dependence (Kaner, Dickinson, Beyer et al., 2009; Moyer, Finney, Swearingen et al., 2002; Ballesteros, Duffey, Querejeta et al., 2004a; and Bertholet, Daepfen, Wietlisbach et al., 2005). This approach has shown evidence of effectiveness for both males and females (Ballesteros Gonzalez-Pinto, Querejeta et al., 2004b), as well as adolescents and adults (Babor et al., 2010). Chisholm, Rehm, Van Ommeren et al. (2004) conducted a meta-analysis of all high quality published studies on these interventions and estimated a net of 22% reduction in consumption of hazardous drinkers. Rehm, Gnam, Popova et al. (2008) estimate that with 70% uptake of SBIR in general practice, there would be an annual saving of \$1.6 billion in terms of health, crime and productivity losses in Canada. It can be concluded that the integration of SBIR into a range of primary and secondary health care settings will have a substantial public health benefit in reducing demand on health care and attendant costs (Babor & Higgins-Bridle, 2000; Johnson, Jackson, Guillaume et al., 2010). It is also important that a position paper or guidelines on SBIR be issued by relevant professional associations (such as for physicians, nurses or psychologists), encouraging SBIR to become regular practice (Babor & Higgins-Bridle, 2000; Johnson et al., 2010).

Recommended policy options and interventions by WHO include: a. build capacity to deliver prevention and care; b. support screening and brief intervention; c. improve capacity to detection of FASD; d. coordinate prevention, treatment and care; e. supply universal access of affordable treatment for low SES

groups; f. maintain systems to register and monitor alcohol-attributable mortality and morbidity with reporting mechanisms; and g. provide culturally-sensitive health and social services as appropriate.

3. Community Action

Over the past 40 years there have been extensive local efforts to reduce alcohol-related problems and alcohol-related harm at the local level. Many have focused on youth (Giesbrecht & Bosma 2011) or drinking and driving (Fell & Voas, 2006; Hingson et al. 1996). Community-based initiatives have demonstrated a number of positive outcomes, including, for example: increased support for restrictions on marketing and price controls; decreases in sales to minors and reduced consumption by youth; reduction in Driving Under the Influence (DUI) arrests and fatal crashes; and declines in violent crimes and assault injuries (Casswell et al. 1990; Room 1990; Giesbrecht et al. 1990; Casswell 2000; Graham & Chandler-Cotts, 2000; Holder et al. 2000; Wagenaar et al. 2000; Giesbrecht & Haydon; 2006).

Communities can be supported and empowered by governments and other stakeholders to use their local knowledge and expertise in adopting effective approaches to prevent and reduce the harmful use of alcohol by changing collective rather than individual behavior while being sensitive to cultural norms, beliefs and value systems.

The following policy options and interventions are recommended by WHO (2010): a. guarantee rapid assessments to identify gaps and priority areas; b. support recognition of alcohol-related harm at the local level and cost-effective responses to them; c. strengthen capacity at the local level; d. provide information about effective community-based interventions, and build capacity for their implementation; e. mobilize communities to prevent selling of alcohol to under-age youth; f. provide community care and support for affected individuals; and, g. support community programs and policies for subpopulations at particular risk.

4. Drink-driving Policies & Countermeasures

Driving under the influence of alcohol seriously affects a person's judgement, coordination, and other motor functions. Alcohol-impaired driving is a significant public health problem that affects both the drinker and in many cases innocent parties. Alcohol-related collisions remain one of the leading sources of alcohol-related deaths and injuries internationally (e.g., Lim et al., 2012).

Nevertheless, research has identified policies and programs that may substantially reduce the impact of drinking and driving on crashes, injuries and fatalities (Shults et al., 2001). Young, novice or newly licensed drivers are at substantially increased collision risk. It has been shown that Graduated Licenses, designed to separate young or new drivers from specific driving hazards such as driving after drinking during this learning period, are effective in reducing collision rates, including those resulting from alcohol (Wickens, Butters, Flam et al., in press; Paglia-Boak, Adlaf & Mann, 2011; Fell, Jones, Romano, et al., 2011).

Research has provided strong support for setting administrative and criminal "per se" blood alcohol limits at 0.05%, since significant impairment is observed at this level, collision risk is significantly increased at this level, and setting or lowering a legal limit to this level results in significant decreases in alcohol-related collisions, injuries and fatalities (Wickens et al., in press; Mann 2002). There is evidence from Sweden that further lowering the limit to 0.02% results in further decreases (Norström & Laurell, 1997; Borschos, 2000) – presumably it eliminates, for instance, any uncertainty about whether there is a need to

plan ahead for alternative transportation home from a dinner party. As well, the probabilities of being caught and punished quickly if driving above the level need to be substantial; sanctions need to have a meaningful deterrent value to be effective (Mann, Stoduto, MacDonald et al., 2001). The punishment need not be severe; in fact, a greater severity of punishment may diminish certainty and celerity (Wright, 2010). Vehicle impoundment has been found to be a meaningful sanction that results in reductions in rates of drinking driving (Voas, Fell, McKnight et al., 2004).

Individuals who have been apprehended for drinking driving offenses are at very high risk for subsequent drinking driving offenses, collisions and alcohol-related deaths (e.g., Peck, Arstein-Kerslake, Helander, 1994; Mann, Anglin, Wilkins et al., 1993). Remedial programs based on principles of effective alcohol intervention, including screening, brief intervention and referral to more intensive treatment where indicated, have been shown to reduce alcohol problems, recidivism and collision risk among offenders (Mann, Anglin, Wilkins et al., 1994; Health Canada, 2004; Wells-Parker, Bangert-Drowns, McMillen et al., 1995; Flam-Zalcman, Mann, Stodotu et al., in press). Programs requiring installation of ignition interlock devices have been shown to reduce recidivism rates substantially while they are in place (Voas et al., 2004), and more recently combining remedial and interlock programs in a mutually supportive fashion has been identified as a very promising countermeasure strategy (Voas et al., 2004; Elder, Vaos, Beirness et al., 2011). Strong evidence-based interventions exist for reducing drink-driving. Strategies to reduce harm associated with drink-driving should include deterrent measures that aim to reduce the likelihood that a person will drive under the influence of alcohol, and measures that create a safer driving environment in order to reduce both the likelihood and severity of harm associated with alcohol-influenced crashes. In some countries, the number of traffic-related injuries involving intoxicated pedestrians is substantial and should be a high priority for intervention.

Several policy options and interventions are recommended by WHO (2010): a. introduce and enforce an upper limit for blood alcohol concentration, with a reduced limit for professional drivers and young or novice drivers; b. promote sobriety check points and random breath-testing; c. introduce administrative suspension of driving licenses; d. introduce graduated licensing for novice drivers with zero-tolerance for drink-driving; e. introduce using an ignition interlock, in specific contexts where affordable, to reduce drink-driving incidents; f. introduce mandatory driver-education, counseling and, as appropriate, treatment programs; g. encourage provision of alternative transportation, including public transport until after closing time for drinking places; h. conduct public awareness and information campaigns in support of policy and in order to increase the general deterrence effect; and, i. run carefully planned, high-intensity, well-executed mass media campaigns targeted at specific situations, such as holiday seasons, or audiences such as young people.

5. Availability of Alcohol

Physical availability is set primarily by the number of outlets and licensed establishments in a certain area as well as the hours and days when these outlets are open. Outlet density is associated with drinking levels in the local population (Livingston, 2012). Restricting alcohol availability by limiting the number of outlets where alcohol is sold has been widely implemented in order to reduce alcohol-related harms by limiting consumption. It is well documented that a substantial increase in the number of alcohol outlets

results in increases in alcohol consumption and associated harms (Livingston, 2012; Stockwell et al., 2009b; 2011). Evidence points to increases in consumption and harms that can result from even minor changes in outlet density due to the gradual relaxation of liquor regulation (Babor et al., 2010). The impact of outlet density on high-risk drinking among younger drinkers is especially pronounced (Livingston, Laslett&Dietze, 2008; Popova, Giesbrecht, Bekmuradov et al., 2009).

There is a long history of research that demonstrates the positive relationship between the density of both on-premise and off-premise outlets, and alcohol-related harms such as violence and injuries, including assaults, alcohol-related crashes, and suicide (Popova et al., 2009) as well as public disturbances (Wilkinson & Livingston, 2012). Harms are especially prevalent in neighbourhoods with high outlet density (Stockwell&Gruenwald, 2004; Livingston, Chikritzhs& Room, 2007). Recently, Livingston (2008) has demonstrated that the effect of outlet density on assaults varies depending on the level of outlet density, suggesting that density limits should be set.

International evidence indicates that longer hours of sale significantly increase the amount of alcohol consumed and the rates of alcohol-related harms. Changes to late night retail hours are particularly associated with levels of heavy drinking (Babor et al., 2010). Extended hours of sale attract a younger drinking crowd and result in higher BAC levels for males (Chikritzhs&Stockwell, 2007). The literature indicates that acute harms were most likely to increase with the extension of hours of sales (Stockwell&Chikritzhs, 2009a; Vingilis, McLeod, Studot et al., 2007).

Public health strategies that seek to regulate the commercial or public availability of alcohol through laws, policies, and programs are important ways to reduce the general level of harmful use of alcohol. Such strategies provide essential measures to prevent easy access to alcohol by vulnerable and high risk groups. Higher commercial and public availability of alcohol can increase the social availability of alcohol and thus contribute to changing social and cultural norms that promote harmful use of alcohol. The level of regulation on the availability of alcohol will depend on local circumstances, including, social, cultural and economic contexts, but can also be limited by trade agreements, treaties and disputes, since these tend to treat alcohol as a normal commercial commodity (Grieshaber-Otto et al., 2006). In some developing and low- and middle-income countries, informal markets are the main source of alcohol and formal controls on sale need to be complemented by actions addressing illicit or informally produced alcohol. Furthermore, restrictions on availability that are too strict may promote the development of a parallel illicit market. Secondary supply of alcohol, for example from parents or friends, needs also to be taken into consideration in measures on the availability of alcohol.

Policy options and interventions recommended by WHO (2010) include the following: (a). establish, operate and enforce an appropriate system to regulate production, wholesaling and serving of alcoholic beverages that places reasonable limitations on the distribution of alcohol and the operation of alcohol outlets in accordance with cultural norms, by the following possible measures: (i) introduce, where appropriate, a licensing system on retail sales, or public health oriented government monopolies; (ii) regulate the number and location of on- and off-premise alcohol outlets; (iii) regulate days and hours of retail sales; (iv) regulate modes of retail sales of alcohol; and, (v) regulate retail sales in certain places or during special events; and (b) establish an appropriate minimum age for purchase or consumption of alcoholic beverages and other policies to raise barriers against sales to, and consumption of alcoholic beverages by, adolescents.

6. Marketing of Alcoholic Beverages

Twenty years of research has shown that young people's exposure to alcohol advertising is linked to increased drinking if the young person currently drinks, and earlier initiation of drinking if the young person has not yet begun drinking (Anderson, De Bruijn, Angus et al., 2009b; Gordon, Harris, Mackintosh et al., 2011; Jernigan, Ostroff, Ross et al., 2007; Snyder, Milici, Slater et al., 2006). Other long-term studies have found that youth exposed to more alcohol ads drink more than youth exposed to fewer ads (Smith, & Foxcroft, 2009; Stoolmiller, Wills, & McClure, 2012). Research with young adults has garnered similar results in that a greater exposure to alcohol portrayals in the media is associated with increased drinking (Engels, Hermans, van Baaren et al., 2009; Koordeman, Anschutz, Engels, 2012; Koordeman, Kuntsche, Anschutz et al., 2011). Alcohol advertising also encourages and reinforces positive attitudes about alcohol and associated drinking behaviors (British Medical Association, 2009); especially problematic are ads featuring young women and girls who are increasingly shown as objectified and sexualized (Smith, Cukier, & Jernigan, in press). Exposure to alcohol ads through event and team sponsorship, on TV, in movies, online, on busses, bus shelters, billboards and other media further reinforce positive associations with alcohol and proffer unrealistic expectations of the effects of drinking; often this will take on the form of consumption in high risk contexts (Brown & Witherspoon, 2002; van Hoof, de Jong, Fennis et al., 2009). Consensus is widespread: Canada's Alcohol Strategy (CCSA, 2007), the US Surgeon General (2007), the American Academy of Pediatrics (2010), the US Institute of Medicine (2004), Anderson et al., (2009b) and the Center on Alcohol Marketing and Youth (Jernigan, 2011) all recommend limiting exposure to alcohol advertising.

Reducing the impact of marketing, particularly on young people and adolescents, is an important consideration in reducing harmful use of alcohol. Alcohol is marketed through increasingly sophisticated advertising and promotion techniques, including linking alcohol brands to sports and cultural activities, sponsorships and product placements, and new marketing techniques such as e-mails, SMS and podcasting, social media and other communication techniques. The transmission of alcohol marketing messages across national borders and jurisdictions on channels such as satellite television and the Internet, and sponsorship of sports and cultural events is emerging as a serious concern in some countries.

It is very difficult to target young adult consumers without exposing cohorts of adolescents under the legal age to the same marketing. The exposure of children and young people to appealing marketing is of concern, as is the targeting of new markets in developing and low- and middle-income countries with a current low prevalence of alcohol consumption or high abstinence rates. Both the content of alcohol marketing and the amount of exposure should be considered when considering ways of protecting young people against these marketing techniques.

The following policy options and interventions are recommended by the WHO (2010): (a). set up regulatory or co-regulatory frameworks, preferably with a legislative basis, and supported when appropriate by self-regulatory measures, for alcohol marketing by: (i) regulating the content and volume of marketing; (ii) regulating direct or indirect marketing in certain or all media; (iii) regulating sponsorship activities that promote alcoholic beverages; and, (iv) restricting or banning promotions in connection with activities targeting young people; (b). develop by public agencies or independent bodies of effective systems of surveillance of marketing of alcohol products; (c). set up effective administration and deterrence systems for infringements on marketing restrictions.

7. Pricing Policies

Although there are important differences, alcohol is like many other products in that demand is inversely related to its price. This means that when the price of alcohol products increase, sales decrease if other factors such as income are kept constant. Several decades of international research show that increasing the price of alcohol through interventions such as excise taxes is one of the most effective approaches for reducing consumption and also, importantly, alcohol-related harm at the population level (Wagenaar, Salois & Komro, 2009; Babor et al., 2010; Wagenaar, Tobler & Komro, 2010). Pricing interventions that better target risky drinkers and risky products have been implemented in several jurisdictions in Canada and elsewhere. Two such policies include *minimum prices*, which reduce the economic availability of the least expensive alcohol often favoured by risky drinkers, and *pricing on alcohol content*, which raises the price of higher strength products and reduces the price of low-strength products to reduce overall ethanol consumption across the population (National Alcohol Strategy Working Group [NASWG], 2007; Meier, Purshouse, & Brennan, 2009; Babor et al., 2010; Stockwell, Auld, Zhao et al., 2012a; Stockwell, Zhao, Giesbrecht et al., 2012b; Stockwell, Zhao, Martin et al. in press; Zhao, Stockwell, Martin et al., 2013). A third pricing policy, regularly adjusting alcohol prices for inflation, ensures that alcohol products do not become cheaper relative to other goods in the marketplace. This maintains the ability of prices to protect public health and safety of the population over time (Babor et al., 2010; Thomas, 2012).

Consumers, including heavy drinkers and young people, are sensitive to changes in the price of drinks. Pricing policies can be used to reduce underage drinking, to halt progression towards drinking large amounts of alcohol and/or episodes of heavy drinking, and to influence consumers' preferences. Increasing the price of alcoholic beverages is one of the most effective interventions to reduce harmful use of alcohol. A key factor for the success of price-related policies in reducing harmful use of alcohol is an effective and efficient system for taxation matched by adequate tax collection and enforcement.

Factors such as consumer preferences and choice, changes in income, alternative sources for alcohol in the country or in the neighboring countries, and the presence or absence of other alcohol measures may influence the effectiveness of this policy option. Demand for different beverages may be affected differently. Tax increases can have different impacts on sales, depending on how they affect the price to the consumer. The existence of a substantial illicit market for alcohol complicates policy considerations on taxation in many countries. In such circumstances tax changes must be accompanied by efforts to bring the illicit and informal markets under effective government control. Increased taxation can also meet resistance from consumer groups and economic operators, and taxation policy will benefit from the support of information and awareness-building to counter such resistance.

These policy options and interventions are recommended by the WHO (2010): a. establish a system for domestic taxation on alcohol accompanied by an effective enforcement system, which may take into account, as appropriate, the alcoholic content of the beverage; b. regularly review prices in relation to level of inflation and income; c. ban or restrict the use of direct and indirect price promotions, discount sales, sales below cost and flat rates for unlimited drinking or other types of volume sales; d. establish minimum prices for alcohol where applicable; e. provide price incentives for non-alcoholic drinks; and, f. reduce or stop subsidies to economic operators in the area of alcohol.

8. Reducing the Negative Consequences of Drinking and Alcohol Intoxication

This target area includes policy options and interventions that focus directly on reducing the harm from alcohol intoxication and drinking without necessarily affecting the underlying alcohol consumption. Current evidence and good practices favor the complementary use of interventions without a broader strategy that prevents or reduces the negative consequences of drinking and alcohol intoxication. In implementing these approaches, managing the drinking environment or informing consumers, the perception of endorsing or promoting drinking should be avoided.

Several policy options and interventions are recommended by WHO (2010): a. regulate the drinking context in order to minimize violence and disruptive behavior, including serving alcohol in plastic containers or shatter-proof glasses and management of alcohol-related issues at large-scale public events; b. enforce laws against serving to intoxication and legal liability for consequences of harm resulting from intoxication caused by the serving of alcohol; c. enact management policies relating to responsible serving of beverages on premises and train staff in relevant sectors in how to better prevent, identify and manage aggressive drinkers; d. reduce the alcoholic strength inside different beverage categories; e. provide necessary care or shelter for severely intoxicated people; and, f. provide consumer information about, and label alcoholic beverages to indicate, the harm related to alcohol.

9. Reducing the Public Health Impact of Illicit Alcohol and Informally Produced Alcohol

Consumption of illicitly or informally produced alcohol could have additional negative health consequences due to a higher ethanol content and potential contamination with toxic substances, such as methanol. It may also hamper governments' abilities to tax and control legally produced alcohol. Actions to reduce these additional negative effects should be taken according to the prevalence of illicit and/or informal alcohol consumption and the associated harm. Good scientific technical and institutional capacity should be in place for the planning and implementation of appropriate national, regional and international measures. Good market knowledge and insight into the composition and production of informal or illicit alcohol are also important, coupled with an appropriate legislative framework and active enforcement. These interventions should complement, not replace, other interventions to reduce harmful use of alcohol.

Production and sale of informal alcohol are ingrained in many cultures and often informally controlled. Thus control measures could be different for illicit alcohol and informally produced alcohol and should be combined with awareness raising and community mobilization. Efforts to stimulate alternative sources of income for those selling informal alcohol are also important.

Policy options and interventions recommended by WHO (2010) include: a. introduce a good quality control with regard to production and distribution of alcoholic beverages; b. regulate sales of informally produced alcohol and bringing it into the taxation system; c. introduce an efficient control and enforcement system, including tax stamps; d. develop or strengthen tracking and tracing systems for illicit alcohol; e. ensure necessary cooperation and exchange of relevant information on combating illicit alcohol among authorities at national and international levels; and, f. issue relevant public warnings about contaminants and other health threats from informal or illicit alcohol.

10. Monitoring & Surveillance

Data from monitoring and surveillance create the basis for the successes and appropriate delivery of other nine policy options. Local, national and international monitoring and surveillance are needed in order

to monitor the magnitude and trends of alcohol-related harms, to strengthen advocacy, to formulate policies and to assess impact of interventions. Monitoring should also capture the profile of people accessing services and reasons why people most affected are not accessing prevention and treatment services. Data may be available in other sectors, and good systems for coordination, information exchange and collaboration are necessary in order to collect the potentially broad range of information needed to have comprehensive monitoring and surveillance.

Development of sustainable national information systems using indicators, definitions and data-collection procedures compatible with WHO's global and regional information systems provides an important basis for effective evaluation of national efforts to reduce harmful use of alcohol and for monitoring trends at subregional, regional and global levels. Systematic continual collection, collation and analysis of data, timely dissemination of information and feedback to policy makers and other stakeholders should be an integral part of implementation of any policy and intervention to reduce harmful use of alcohol. Collecting, analyzing and disseminating information on harmful use of alcohol are resource-intensive activities.

Policy options and interventions recommended by WHO (2010) include: a. establish effective frameworks for monitoring and surveillance activities including periodic national surveys on alcohol consumption and alcohol-related harm and a plan for exchange and dissemination of information; b. establish or designate an institution or other organizational entity responsible for collecting, collating, analyzing and disseminating available data, including publishing national reports; c. define and track a common set of indicators of harmful use of alcohol and of policy responses and interventions to prevent and reduce such use; d. create a repository of data at the country level based on internationally agreed indicators and report data in agreed format to WHO and other relevant organizations; and, e. develop evaluation mechanisms with the collected data in order to determine the impact of policy measures, interventions and programs put in place to reduce the harmful use of alcohol.

E. Challenges

In most rich countries, alcohol consumption levels have stabilized in recent years, though at relatively high levels. But in many low- and middle-income countries, particularly where the national income has been rising, rates of drinking at all have increased, and along with them levels of per-capita consumption (WHO, 2014). There has been considerable consolidation in global alcohol production (Jernigan, 2010), and, often acting through governments of high-income countries where the producers have headquarters, alcohol production interests have used international trade treaties and disputes to counter efforts by governments to impose limits on the market and marketing which aim to reduce rates of alcohol problems (Ziegler, 2009; O'Brien, 2013). Meanwhile, work by international agencies on coordinating national efforts to reduce alcohol problems is limited to a handful of staff at the World Health Organization. A Framework Convention on Alcohol Control (Room et al., 2008), or coverage of alcohol under the international drug treaties (Room, 2014), is needed, if only to counter the effects of trade agreements and disputes in weakening national responses to alcohol problems.

As the chapter has suggested, there is by now a well-developed literature to guide governments and civil society at national and subnational levels on strategies to reduce rates of alcohol problems (Babor et al., 2010). Even though the studies in this literature are primarily from high-income societies, there is by now

also an increasing literature based on low- and middle-income countries (Medina-Mora et al., in press), with generally similar findings, although there is clearly a need to take into account special circumstances such as a large informal alcohol supply, outside state control.

A primary challenge, in many societies, is to develop the political will for action. The economic interests involved in alcohol production and sales are often well-connected in governments, and expert in placing roadblocks in the path of changes in the interest of public health and welfare. Those adversely affected by others' drinking, who perhaps have the most to gain from such changes, are often far from the centres of power in the society. The lessons of history, as well of some contemporary examples in low- and middle-income societies (Room et al., 2002) is that popular grassroots movements, acting for those most disadvantaged by controlling free and easy availability of alcohol, may be needed for substantial change to occur.

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