**ANALYSIS: SOLUTIONS FOR PREVENTION AND CONTROL** 

OF NON-COMMUNICABLE DISEASES

Time to deliver on alcohol control

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1994 words

Non-communicable diseases (NCDs) are now the key causes for deaths and disabilities in the world, with alcohol use recognized as a leading risk factor. <sup>12</sup> Alcohol use is also linked to violence, injuries, mental disorders and infectious diseases,<sup>3</sup> causing substantial economic and social harms, including harms to others. <sup>45</sup> The health, social and economic risks associated with alcohol consumption justify greater investment in public health oriented alcohol policies, including for the prevention of NCDs.<sup>3</sup>

Global commitments to reduce the harmful use of alcohol have been made through the WHO Global strategy to reduce the harmful use of alcohol (WHO Global Alcohol Strategy), WHO and UN resolutions on NCDs and through the Sustainable Development Goals.<sup>6-9</sup> While effective and cost-effective interventions exist, progress in the formulation and implementation of national and local alcohol control measures has been patchy and uneven.<sup>3</sup> Increased multisectoral action is needed to formulate effective policies that reduce the harmful use of alcohol, boost implementation of existing policies, and monitor their impact.<sup>3</sup>

# Alcohol – a leading risk factor for NCDs and the global burden of disease

There is growing scientific consensus that there is no safe levels of alcohol consumption <sup>2</sup> <sup>14</sup> <sup>15</sup> WHO estimates that harmful use of alcohol contributed to 3 million deaths (5.3% of all deaths) in 2016, of which 1.7 million were from NCDs. Overall, harmful use of alcohol accounted for 5.1% of the global burden of disease and 4.2% of the burden from NCDs in 2016. <sup>3</sup>

This burden is borne across low-, middle-, and high-income countries. While the European region is home to both the greatest share of alcohol consumption and highest relative burden

vis-à-vis other risk factors, LMICs and especially Africa experience the highest *per capita* rates of alcohol-related harm.<sup>3</sup> (see table 1)

Table 1 Per capita consumption, share of alcohol attributable death and age-standardized alcohol-attributable deaths per 100 000 people, by WHO region and the world (2016)

	AFR	AMR	EMR	EUR	SEAR	WPR	World
Total per capita consumption (15+) in 2016 in litres of pure alcohol	6.3	8.0	0.6	9.8	4.5	7.3	6.4
Share of all deaths (in %) attributable to alcohol consumption	5.1	5.5	0.7	10.1	4.6	4.1	5.3
Age-standardized alcohol-attributable deaths per 100 000 people	70.6	34.1	7.0	62.8	36.8	24.3	38.8

Source: Reproduced from the WHO Global status report on alcohol and health 2018

There are considerable age and gender differences in the level of alcohol related harm. Alcohol accounts for 7.1% and 2.2% of the global burden for males and females respectively and is the leading risk factor for premature mortality and disability among those aged 15 to 49 years, accounting for 10% of all deaths in this age group <sup>2</sup>. Disadvantaged populations have higher rates of alcohol-related death and hospitalization than more affluent populations, despite consuming the same amount, or even a lower amount of alcohol. <sup>16</sup> Thus individuals of low socio-economic status bare a disproportionate burden of the harm, with unhealthy diet, smoking, less exercise and less access to health education and health care compounding the

The current rates of alcohol abstention and population growth are two important dimensions when analyzing the future impact of harmful use of alcohol on global health and development. In 2016, 57 percent of the world population (15+ years) had not consumed alcohol in the previous 12 months.<sup>3</sup> This is 3.1 billion of abstainers compared to the current 2.3 billion people consuming alcohol. In the African continent only 32 percent of the adult population are current alcohol consumers, but with its population predicted to grow by 1.2

risks for these groups. 17 18

billion people by 2050, representing more than half of the world's population growth in that period, <sup>19</sup> policies to reduce the harmful use of alcohol in Africa may be particularly important. A 29% increase in alcohol consumption in the South-East Asia Region since 2010 is strong grounds for policy action to curb such a dramatic change in trajectory.<sup>3</sup>

Thus, urgent action is needed not only from a health perspective, but also from a development perspective as well as with an equity lens, where the differences in the responses to the negative health and development consequences of alcohol consumption are substantial.

## The solutions exist

WHO Global strategy to reduce the harmful use of alcohol (the WHO Global alcohol strategy), endorsed by the World Health Assembly in 2010, <sup>9</sup> provides guidance for countries on formulating and implementing effective alcohol policies.

Increasing excise taxes on alcoholic beverages, comprehensive restrictions on alcohol advertising and restrictions on the physical availability of retailed alcohol are the most cost-effective interventions; drink-driving countermeasures (including blood alcohol concentration (BAC) legal limits) and the provision of brief psychosocial interventions for persons with hazardous and harmful alcohol use are also effective policies that complement the population wide alcohol control measures. <sup>10</sup> <sup>12</sup> <sup>20</sup> Implementation of the three most cost-effective interventions would result in a return on investment of \$9 for every \$1 invested in low and lower-middle income countries. <sup>21</sup> Over 50 years, a 20% global increase in alcohol taxes could avert 9 million premature deaths. <sup>22</sup>

# The solutions are not implemented

Alcohol policy development and implementation have improved globally since the adoption of the WHO Global alcohol strategy but are still far from effectively protecting populations from alcohol-related harm. The most recent WHO Global status report on alcohol and health indicates that most countries in the world, and especially low- and middle-income countries, have not implemented a comprehensive set of alcohol policies.<sup>3</sup> Not a single low-income country reported increases in resources devoted to alcohol policy implementation since the adoption of the WHO Global alcohol strategy in 2010.

Looking at the countries reporting to WHO in 2016 and 2018<sup>3</sup> <sup>23</sup>, it is clear that many 'best buys' are significantly under-utilized or under-enforced, and that low- and middle-income countries are more likely to have weaker policies. For example:

- (i) Restricting physical access to alcohol is a proven strategy to reduce alcoholrelated harms, yet less than one third of countries indicated the existence of
  regulations on outlet density and/or days of sale. And while the vast majority of
  countries reported national or subnational minimum legal purchase age (most
  often 18 years), some countries have no legal minimum purchase age. Those tend
  to be low-income or lower-middle-income countries, primarily in Africa.
- (ii) For drink—driving, legislation is very common (155 countries indicated that they had some type of drink—driving legislation), yet less than half of low-income countries had established any BAC limits for driving. Enforcement of existing laws is also considered low.
- (iii) In terms of treatment, only 14% of reporting countries indicated high treatment coverage, i.e. treatment coverage of more than 40%, and 28% indicated very

limited or close to zero treatment coverage. All countries reporting close to no treatment coverage were low- or lower-middle-income countries and the majority (70%) with high treatment coverage had upper-middle or high incomes.

- (iv) While most of countries indicate they have some type of restriction of alcohol advertising for all media types, marketing restrictions on the Internet and social media are comparatively far behind, suggesting that regulation in many countries continues to lag behind technological innovation in the alcohol industry. Most of the countries that reported no restrictions across all media types were located in the African or Americas regions.
- (v) Increasing the price of alcohol is the single most effective strategy to reduce and prevent alcohol-related harm, and 95% of all reporting countries implement alcohol excise taxes. However, very few use such taxes as a public health policy to reduce consumption with fewer than half use price strategies such as adjusting taxes to keep up with inflation and income levels, imposing minimum pricing policies, or banning below-cost selling or volume discounts.

Some countries, however, have been successful in implementing evidence-based, cost-effective and high-impact policies and have documented positive impacts on health, leading the way for concerted action.<sup>24</sup>

### What needs to be done?

Accumulated evidence on the effective and cost-effectiveness of different alcohol control measures are available for governments.<sup>3</sup> Experience show that there is a need to protect public health-oriented policy-making from alcohol industry interference<sup>13 25 26</sup> as well as strong monitoring systems<sup>11</sup> to ensure accountability and track progress in the

implementation of the interventions. Thus, three key strategies should drive country action to reduce harmful use of alcohol: Implement, Monitor and Protect. The value of such focused action is that they provide clear guidance for prioritizing health investments, enabling monitoring and benchmarking and securing that public health drives the formulation of policies to reduce the harmful use of alcohol.

## *Implement*

Several of the most cost-effective interventions require legislative or regulatory action. This may build upon an existing framework or may require new action and policy dialogue. Countries could take a systematic approach that includes review and revision of existing rules, development of new regulatory measures, as needed, and a thorough implementation strategy. In addition to legislative and regulatory reforms, effective intervention requires some degree of operational programs for successful implementation. Many such programs will be around enforcement – of taxes, of road traffic laws, of marketing restrictions, of regulations on availability, including sale to minors and licensing. Such programs require dedicated and sustained financing and can be administered at national, regional or local levels.

Excise and alcohol corporate tax revenues and licensing fees can all contribute to these costs. A 20% increase in price of alcohol due to higher taxes could accumulate as much as 9 trillion US\$ in increased revenues globally over a 50 years period. 22 By introducing a levy on alcohol, Member State/country implementation of the most effective interventions could be self-funded.

Robust implementation will require multisectoral collaboration within countries. For example, tax policy must involve finance ministries, and drink driving prevention must

involve transportation and law enforcement. Many interventions also rely on policy coherence for their success. Public health must be given proper deference in relation to trade issues and economic development and not allowing them to dominate over health and wellbeing of populations. Civil society is an essential part of the implementation and strong and appropriate alliances, both within and outside of government, need to be built beyond the health sector.

## Monitor

Implementation must be supported by strong *monitoring* systems, to enable accountability and progress tracking. Countries that implement effective and cost-effective interventions should, where possible, develop an accompanying monitoring and evaluation system which tracks policy and program implementation according to best practices and which maintains ongoing monitoring of key indicators. Such system should include monitoring of sales, consumption, health and social harms, economic impact, policy implementation and industry practices. Countries should produce regular public reports of the above metrics. Regular and robust monitoring of policy and program implementation is essential to maintain quality and fidelity to best practices, to measure impact, and to inform public communication.

#### Protect

One of the leading principles in the global alcohol strategy is that public policies and interventions to prevent and reduce alcohol-related harm should be guided and formulated by public health interests and based on clear public health goals and the best available evidence<sup>9</sup>. Several of the most cost-effective interventions restrict commercial activity; accordingly, governments have and will face opposition from vested interests to translate these policy interventions into effective national action<sup>26-28</sup>. The involvement of the alcohol industry in

public health has in this regard many potential risks with limited or no benefits for public health. <sup>25</sup> <sup>29-31</sup> Activities of the alcohol industry related to marketing, education, corporate political activities and funding of research undermine public health efforts and remain a challenge for governments with limited resources to promote and implement cost effective measures<sup>31</sup> Ultimately, relying on public health interests free from commercial biases and scientific evidence is the best protection, requiring a whole of government approach and commitment to reducing harmful use of alcohol.

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# Conclusion

No matter how comprehensive or strict the current national alcohol control system is, every country is likely to benefit from reviewing, adjusting and strengthening its component actions from time to time. While individual countries will develop differing approaches in accordance with their epidemiological profiles and alcohol market context, they can all benefit from sustained implementation of the most effective and cost-effective interventions outlined in this article.

Key messages:

 Harmful use of alcohol is a global health issue ranking among the leading risk factors for the global burden of disease.

- Effective and cost-effective strategies to reduce the harmful use of alcohol exists and should be utilized more also with an equity lens
- Solid global policy frameworks and goals for alcohol control exist
- There is an inherent conflict of interest between commercial and public health goals
  related to alcohol and therefore separating the alcohol industry from policy making
  and reducing its interference is fundamental to the success of global, regional and
  national efforts to control alcohol related problems.
- There is an urgent need to synthesize and translate existing knowledge into an action package for countries in their efforts to prevent and reduce the harmful use of alcohol.

#### References

- Collaborators GBDCoD. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet (London, England)* 2018;392(10159):1736-88. doi: 10.1016/S0140-6736(18)32203-7 [published Online First: 2018/11/30]
- 2. Collaborators GBDA. Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet (London, England)* 2018;392(10152):1015-35. doi: 10.1016/S0140-6736(18)31310-2 [published Online First: 2018/08/28]
- 3. World Health Organization. Global status report on alcohol and health 2018. Geneva: World Health Organization, 2018.
- 4. Karriker-Jaffe KJ, Room R, Giesbrecht N, et al. Alcohol's Harm to Others: Opportunities and Challenges in a Public Health Framework. *J Stud Alcohol Drugs* 2018;79(2):239-43. [published Online First: 2018/03/20]
- 5. Laslett AM RR, Waleewong O, Stanesby O, Callinan S, editors. Harm to others from drinking: patterns in nine societies. Geneva: World Health Organization, In press.
- 6. World Health Organization. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva: World Health Organization 2013.
- 7. United Nations. Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Time to deliver: accelerating our response to address non-communicable diseases for the health and well-being of present and future generations., 2018.

- 8. United Nations. Sustainable development goals: 17 goals to transform our world New York: New York (NY); 2016 [Available from:
  - https://www.un.org/sustainabledevelopment/ accessed 4 february 2019.
- 9. World Health Organization. Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization 2010.
- 10. World Health Organization. Tackling NCDs: "best buys" and other recommended interventions for the prevention and control of noncommunicable diseases. Geneva: World Health Organization, 2017.
- 11. Poznyak V, Fleischmann A, Rekve D, et al. The world health organization's global monitoring system on alcohol and health. Alcohol research: current reviews 2013;35(2):244-9.
- 12. Siegfried N, Parry C. Do alcohol control policies work? An umbrella review and quality assessment of systematic reviews of alcohol control interventions (2006 - 2017). PloS one 2019;14(4):e0214865. doi: 10.1371/journal.pone.0214865 [published Online First: 2019/04/11]
- 13. Ferreira-Borges C, Parry CD, Babor TF. Harmful Use of Alcohol: A Shadow over Sub-Saharan Africa in Need of Workable Solutions. Int J Environ Res Public Health 2017;14(4) doi: 10.3390/ijerph14040346 [published Online First: 2017/03/28]
- 14. Holmes MV, Dale CE, Zuccolo L, et al. Association between alcohol and cardiovascular disease: Mendelian randomisation analysis based on individual participant data. BMJ (Clinical research ed) 2014;349:g4164. doi: 10.1136/bmj.g4164 [published Online First: 2014/07/12]
- 15. Millwood IY, Walters RG, Mei XW, et al. Conventional and genetic evidence on alcohol and vascular disease aetiology: a prospective study of 500 000 men and women in China. Lancet (London, England) 2019 doi: 10.1016/S0140-6736(18)31772-0 [published Online First: 2019/04/09]
- 16. Bellis MA, Hughes K, Nicholls J, et al. The alcohol harm paradox: using a national survey to explore how alcohol may disproportionately impact health in deprived individuals. BMC public health 2016;16:111. doi: 10.1186/s12889-016-2766-x [published Online First: 2016/02/19]
- 17. Marmot M, Bell R. Social determinants and non-communicable diseases: time for integrated action. BMJ (Clinical research ed) 2019;364
- 18. Stringhini S, Carmeli C, Jokela M, et al. Socioeconomic status and the 25 x 25 risk factors as determinants of premature mortality: a multicohort study and meta-analysis of 1.7 million men and women. Lancet (London, England) 2017;389(10075):1229-37. doi: 10.1016/S0140-6736(16)32380-7 [published Online First: 2017/02/06]
- 19. United Nations. World Population Prospects 2017: United Nations; 2017 [Available from: https://population.un.org/wpp/ accessed 28 February 2019.
- 20. Chisholm D, Moro D, Bertram M, et al. Are the "Best Buys" for Alcohol Control Still Valid? An Update on the Comparative Cost-Effectiveness of Alcohol Control Strategies at the Global Level. J Stud Alcohol Drugs 2018;79(4):514-22. [published Online First: 2018/08/07]
- 21. World Health Organization. Saving lives, spending less: a strategic response to noncommunicable diseases. Geneva, 2018.
- 22. The Task Force on Fiscal Policy for Health. Health Taxes to Save Lives. Employing Effective Excise Taxes on Tobacco, Alcohol, and Sugary Beverages, 2019.
- 23. Jernigan DT, P. Global developments in alcohol policies: progress in implementation of the WHO global strategy to reduce the harmful use of alcohol since 2010.

- Background paper developed for the WHO Forum on Alcohol, Drugs and Addictive Behaviours, 26-28 June 2017: World Health Organization, 2017.
- 24. World Health Organization. Regional Office for Europe. Alcohol policy implementation in the European Region. Update with 2015 data. Copenhagen: World Health Organization, 2017.
- 25. McCambridge J, Mialon M, Hawkins B. Alcohol industry involvement in policy making: A systematic review. *Addiction* 2018 doi: 10.1111/add.14216 [published Online First: 2018/03/16]
- 26. Babor TF. Out of Africa: Three Threads Tying the Alcohol Industry to an Emerging Alcohol Epidemic. *J Stud Alcohol Drugs* 2018;79(2):157-58. [published Online First: 2018/03/20]
- 27. Bakke O, Endal D. Vested interests in addiction research and policy alcohol policies out of context: drinks industry supplanting government role in alcohol policies in sub-Saharan Africa. *Addiction* 2010;105(1):22-8. doi: 10.1111/j.1360-0443.2009.02695.x [published Online First: 2010/01/19]
- 28. McCambridge J, Kypri K, Miller P, et al. From tobacco control to alcohol policy. *Addiction* 2014;109(4):528-9. doi: 10.1111/add.12463 [published Online First: 2014/03/13]
- 29. Mialon M, McCambridge J. Alcohol industry corporate social responsibility initiatives and harmful drinking: a systematic review. *Eur J Public Health* 2018;28(4):664-73. doi: 10.1093/eurpub/cky065 [published Online First: 2018/04/27]
- 30. Petticrew M, McKee M, Marteau TM. Partnerships with the alcohol industry at the expense of public health. *Lancet (London, England)* 2018;392(10152):992-93. doi: 10.1016/S0140-6736(18)32320-1 [published Online First: 2018/09/29]
- 31. Babor TF, Robaina K, Brown K, et al. Is the alcohol industry doing well by 'doing good'? Findings from a content analysis of the alcohol industry's actions to reduce harmful drinking. *BMJ Open* 2018;8(10):e024325. doi: 10.1136/bmjopen-2018-024325 [published Online First: 2018/10/27]

#### Box 1

WHO, with partners, has launched the SAFER initiative. The overall objective of the initiative is to provide support for Member States in reducing the harmful use of alcohol by boosting and enhancing the ongoing implementation of the global alcohol strategy and other WHO and UN instruments. SAFER is based on the accumulated evidence of cost-effectiveness of different alcohol control measures and recognizes the need to protect public health-oriented policy-making from alcohol industry interference as well as strong

monitoring systems to ensure accountability and track progress in the implementation of the SAFER interventions.

SAFER is an acronym for the five most cost-effective interventions to reduce alcohol related harm.

The SAFER interventions									
STRENGTHEN	ADVANCE	FACILITATE	ENFORCE	RAISE					
restrictions on alcohol availability	and enforce drink driving countermeasures	access to screening, brief interventions, and treatment	bans or comprehensive restrictions on alcohol advertising, sponsorship, and promotion	prices on alcohol through excise taxes and pricing policies					

WHO, the UNITAF secretariat and UNDP together with IOGT International, the NCD Alliance, the Global Alcohol Policy Alliance and Vital Strategies have been working together to initiate SAFER and are now working to further develop SAFER, engage more partners in the initiative, raise resources and implement SAFER at country level.