World Health Organization

Population-wide interventions for reducing alcohol consumption:

what does the per capita consumption indicator say?

Snapshot series on alcohol control policies and practice

Brief 5, 16 November 2021

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Brief at-a-glance

The problem

Population-wide interventions are the most cost-effective approach to tackle the root causes of and reduce overall alcohol consumption and harm. Many global commitments and surveillance systems use this population-wide approach to track progress in implementing alcohol control policies. Per capita alcohol consumption is used as an indicator for that purpose. Despite its many advantages, countries rarely publish or use it as an indicator to monitor policies that tackle alcohol consumption.

The evidence

Per capita alcohol consumption is a summary measure of alcohol consumption for a population measured in litres of pure alcohol consumed by an average adult per year. It presents many advantages as an indicator for monitoring policies, including being readily available, extremely reliable, comparable across settings and closely associated with alcohol-related harm.

The know-how

Challenges related to the use of national and international sources for estimating the per capita alcohol consumption indicator as well as its use to monitor policy effectiveness are illustrated by the experiences from Baltic countries (Estonia, Latvia and Lithuania) and Brazil.

The next steps

The next steps for policy- and decision-makers include setting out training opportunities to better understand the indicator and advocating for its implementation. The next steps for civil society, community-based organizations, researchers and research institutions include considering ways to improve measurement and estimation of unrecorded alcohol production and consumption to strengthen the accuracy of per capita alcohol consumption indicator as well as to regularly monitor the characteristics of the per capita alcohol consumption indicator to ensure it remains fit for purpose.

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Related resources

Webinar recording | Event description | Programme

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About the series

This Snapshot is part of a series of briefs tackling critical issues related to the determinants driving the acceptability, availability and affordability of alcohol consumption and how it affects people and their communities. The series aims to facilitate evidence and experience-informed conversations on key topics relevant to achieving the Sustainable Development Goals and the noncommunicable diseases targets in the context of the WHO Global Strategy for reducing the harmful use of alcohol and its global action plan. Each brief is the result of a global, multistakeholder conversation convened by the Less Alcohol Unit, part of the WHO Department of Health Promotion. The topics of the series emerged in response to blind spots in the current policy conversations. The approach and length of the Snapshots do not fully describe the complexities of each topic nor do the illustrative country experiences. The series is a conversation-starter rather than normative guidance. Relevant WHO resources are provided to explore the subject in more depth.

The series is intended for a wide audience, including professionals working in public health and local and national alcohol policy focal points, policy-makers, government officials, researchers, civil society groups, consumer associations, the mass media and people new to alcohol research or practice.

What is a health promotion approach to reducing alcohol consumption?

Drinking has multidimensional connotations. Robust and growing evidence demonstrates that cultural, social and religious norms influence alcohol consumption – acceptability, ease of purchase (availability) and price (affordability). Addressing this multidimensional causality chain requires a portfolio of health promotion interventions to moderate the determinants driving alcohol consumption and, in turn, enable populations to increase control over and improve their health to realize their full potential.

Determinants driving the consumption of alcohol

	Acceptability	Availability	Affordability
Public health objectives	Protect consumers	Promote healthier settings	Build resilient societies
Health promotion interventions	Raising awareness, e.g. labelling	Mediating licensing, e.g. outlet density and location, online sales	Increasing prices, excise taxes and moderating other fiscal measures, reducing and ending financial incentives and subsidies
	Banning or comprehensively restricting alcohol marketing, advertising, sponsorships and promotion	Promoting healthy settings and pro-health environment, e.g. schools, stadiums	Tackling unrecorded alcohol
	Adressing commercial determinants and conflict of interests		

How are the briefs developed?

The briefs result from a quick scanning of the recent evidence on the topic, insights from leading experts, consultation with selected countries and discussions that took place during webinars convened to create a platform to match evidence, practice and policies. Each webinar, attended by more than 100 participants, took place over 1.5 hours in English, Russian and Spanish. Between 8 and 10 speakers were invited to participate in each webinar, engaging global experts, officials from governments, academia, civil society and other United Nations agencies. Participants also engaged in the webinar by posting questions, sharing experiences and resources. The snapshot has been reviewed by the respective speakers – the contributors to each brief – to confirm the completeness and accuracy of the synthesis prepared.

Interested in other topics?

Visit the *Less Alcohol webpage* for other briefs in this series and forthcoming webinars. During 2021, topics including alcohol consumption and socioeconomic inequalities, unrecorded alcohol, conflicts of interest, labelling, digital marketing and per capita alcohol consumption have been explored. If you have a suggestion for a topic that has yet to be explored, contact our team at *lessalcohol@who.int.*

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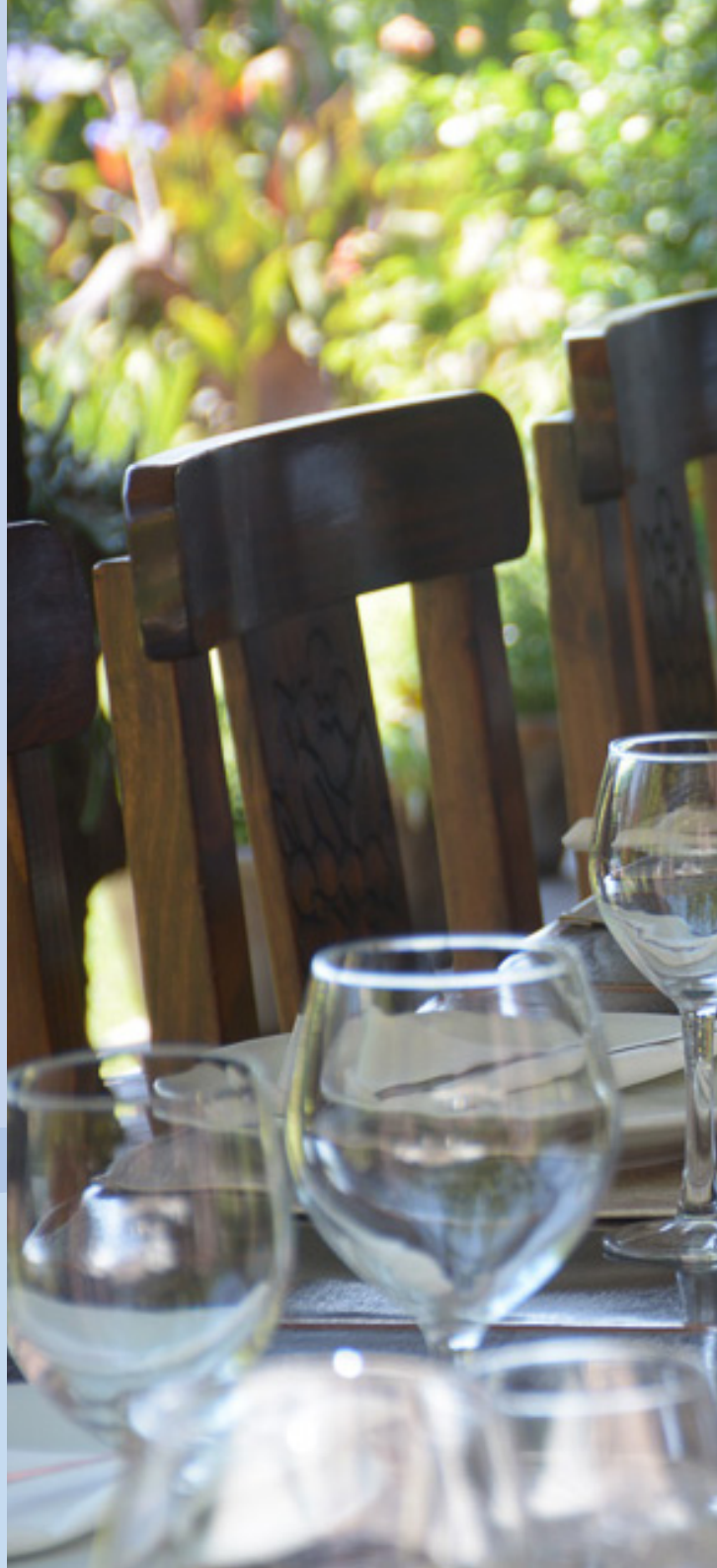

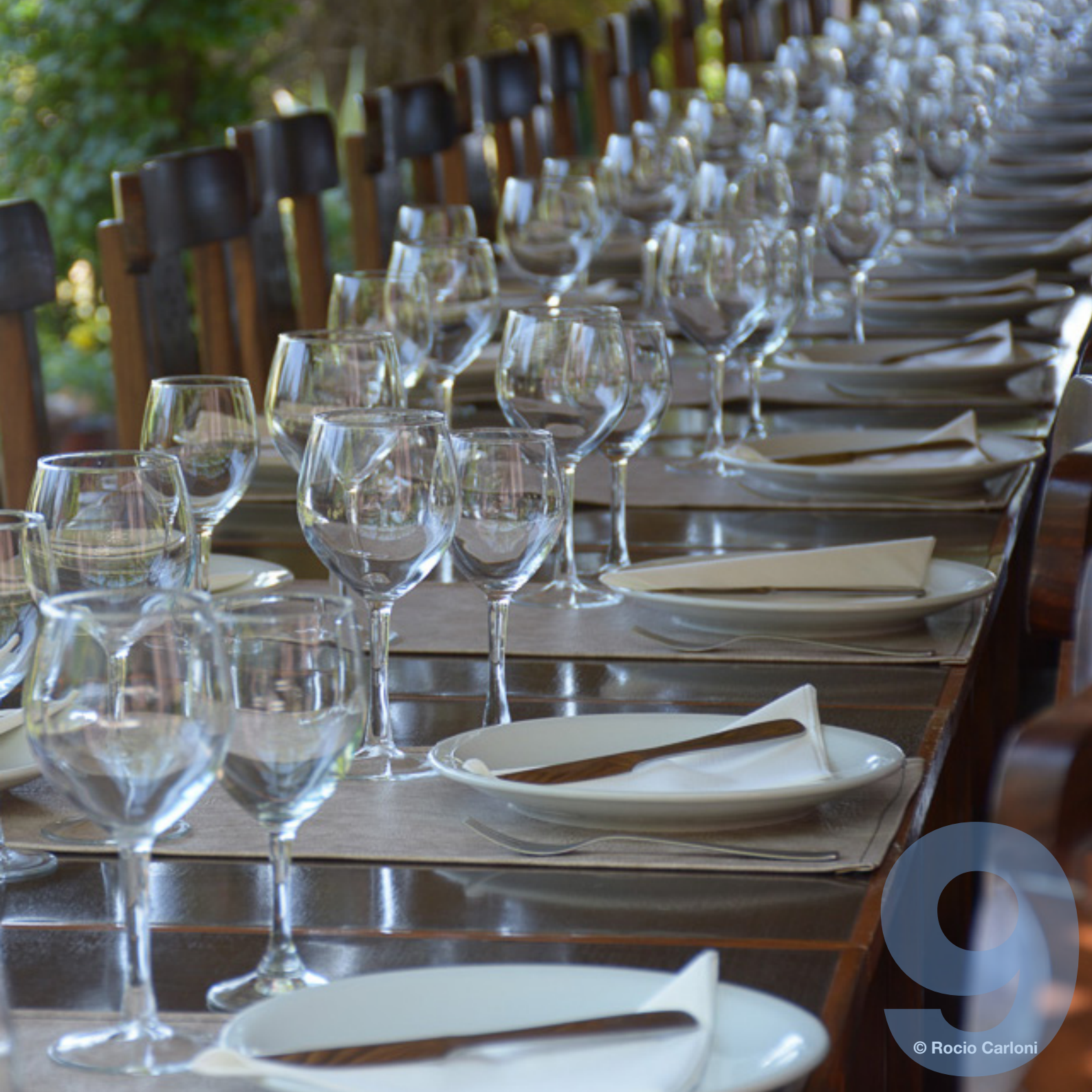
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The problem

This section provides a brief overview of why this issue matters to the health of populations and why it is worth further examining within global alcohol policy

Population-wide interventions are the most cost-effective approach to tackle the root causes of and reduce overall alcohol consumption and harm *(1)*. Many global commitments and surveillance systems use this population-wide approach to track progress in implementing alcohol control policies. Per capita alcohol consumption is used as an indicator for this purpose. For example, the United Nation's Sustainable Development Goals, Target indicator 3.5.2 *(2)*; the WHO Global Monitoring Framework for Noncommunicable Diseases global target of a 10% reduction in the harmful use of alcohol by 2025 *(3)* and the Global alcohol action plan 2022–2030 to strengthen implementation of the Global Strategy to Reduce the Harmful Use of Alcohol - Second draft *(4)*.

WHO has collected data on per capita alcohol consumption since 1996 within the Global Information System on Alcohol and Health *(5)*, and this is available for almost all countries on a yearly basis. The trends of per capita alcohol consumption have consistently shown a direct association with alcohol harm and mortality *(6,7)*. The per capita alcohol consumption is also sensitive to variation in the implementation of alcohol control policies *(8)*. More recently, the per capita alcohol consumption has been used in modelling alcohol consumption worldwide *(9)*. Despite its many advantages, countries rarely publish or use alcohol per capita as an indicator to monitor policies that tackle alcohol consumption.

What does this snapshot aim to achieve?

This snapshot aims to establish per capita alcohol consumption as a reliable indicator for tracking public health interventions; examine its use in selected countries; and, present possible next steps for government policy- and decision-makers, civil society and for researchers and research institutions to move the conversation beyond this brief.

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The evidence

This section provides a summary of what is known about the issue, implementation considerations for different settings, and any gaps in the existing knowledge base

Per capita alcohol consumption is the best available indicator to monitor policies seeking to curb alcohol consumption

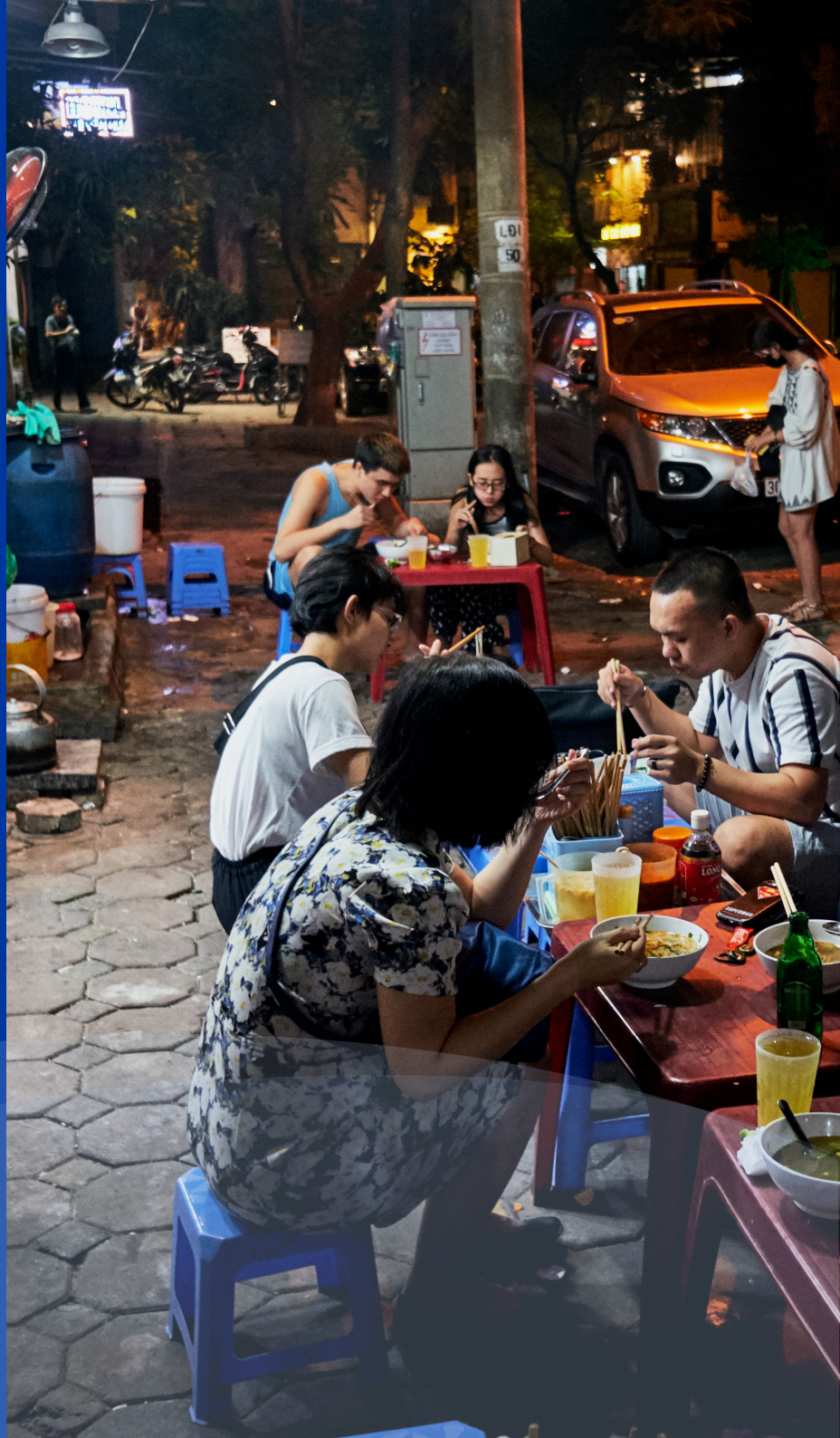
Per capita alcohol consumption is a summary measure of the consumption of alcohol for a population measured in litres of pure alcohol consumed by adults per year. Using per capita alcohol consumption as an indicator has numerous advantages, including being strongly associated with the mortality related to alcohol, burden of disease and other alcohol-related harm. In addition, as an indicator, it is available, relatively easy to implement and reliable since it is derived from data on the production and sales of alcoholic beverages that are often already collected. This is advantageous compared with survey-based measures that may be biased through underreporting and low response rates. Per capita alcohol consumption is also sensitive to the implementation of population-wide policies such as, among others, establishing a minimum price or increasing excise taxes of alcoholic beverages, which have been shown to reduce consumption and attributable harm. Finally, the per capita alcohol consumption indicator can be used to compare among countries and within countries at different times. In particular, comparability of periods within a given country supports policy-makers to understand impacts from changes in alcohol control policies. Despite these many positive attributes, few countries collect, publish and use per capita alcohol consumption indicators, limiting its comparative power. For example, in the Americas, only six countries collect data on per capita alcohol consumption. Instead, many countries rely on data published by industry, which cannot be validated *(7)*.

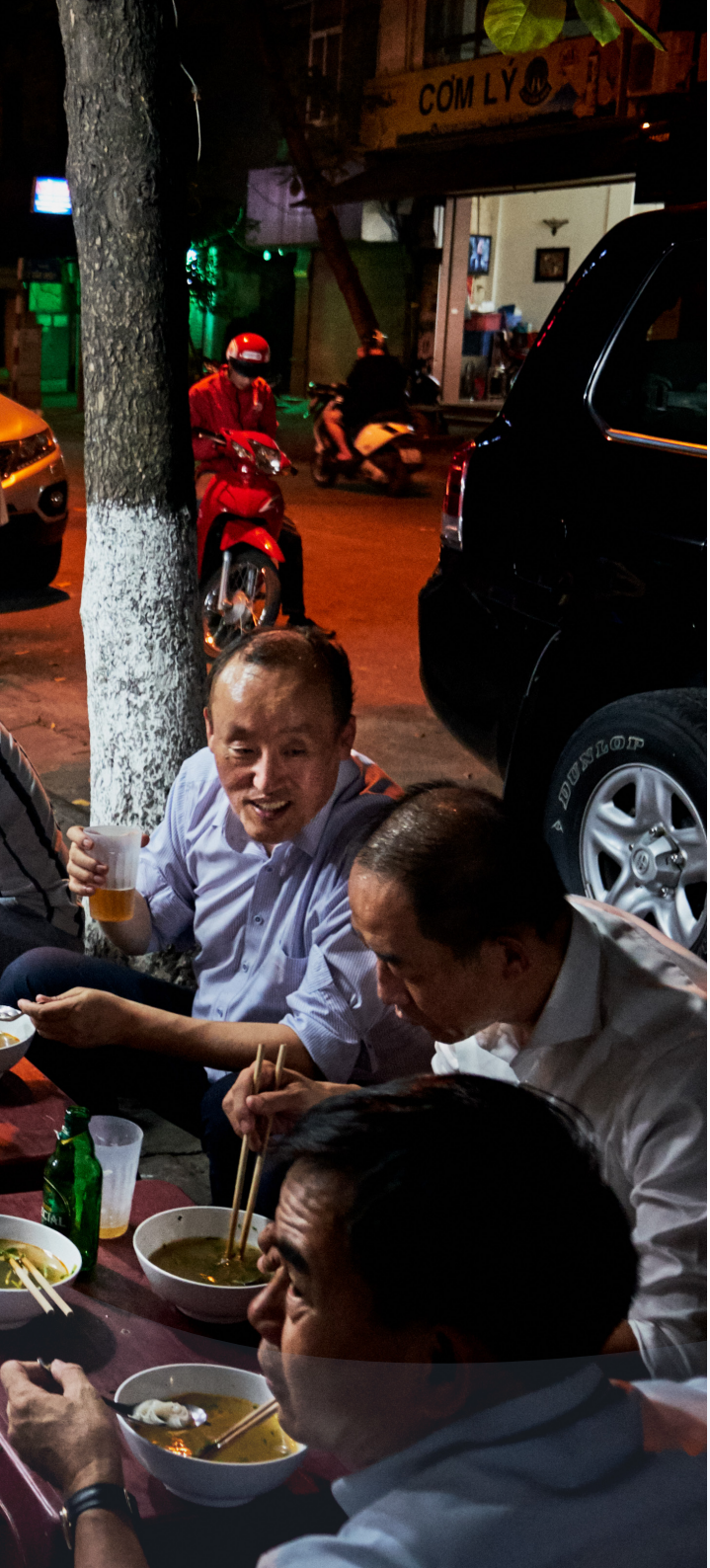
Additional indicators need to complement per capita alcohol consumption

Although comparability at different periods is always possible, some countries may benefit from collecting additional indicators to complement per capita alcohol consumption. For example, countries with a high proportion

“Alcohol per capita is an efficient indicator – it is reliable and available yearly in many countries, it is sensitive to change and linked to alcohol-related harms. All of these characteristics also have been shown to be advantageous in comparison to alternative indicators and permits easy comparison between and within countries”

Charles Parry, South African Medical Research Council, at the webinar Population-wide interventions for reducing alcohol consumption: what does the per capita consumption indicator say?





of abstainers or a high proportion of consumption of unrecorded alcohol may benefit from regularly gathering additional data, for example, the prevalence of heavy drinkers and the consumption of unrecorded alcohol. This additional information can be more easily disaggregated to provide insight on segments of the population and enable more precise tailoring of alcohol control measures. Data sources that inform the consumption of sub-groups such as heavy drinkers or people with lower socioeconomic status can complement per capita consumption. It is important that the governance of these data sources ensures independence and accuracy.

Reducing per capita alcohol consumption leads to less alcohol-related harm among all drinkers

Per capita alcohol consumption is used to monitor exposure and assess progress against internationally and nationally goals. Evidence consistently shows close associations between per capita alcohol consumption and population health and social harm. Across different populations, the distribution of alcohol consumption displays a relatively fixed shape, with no clear distinction between heavy drinkers and other drinkers. The population distribution of alcohol consumption is represented by a skewed curve, indicating that a low proportion of individuals consumes most of the alcohol. However, the harm associated with that consumption does not follow the same

pattern. The mean consumption of alcohol in a population is associated with the prevalence of drinking; an increase in per capita alcohol consumption arises from a change in the whole distribution, heavy drinkers included. Although the risk of harm from drinking increases with consumption, most drinkers who do not drink heavily account for the larger proportion of harms from alcohol. This is especially true for those conditions related to alcohol consumption, such as liver cancer, liver cirrhosis and drink-driving accidents. Alcohol policies that effectively reduce alcohol consumption affect the whole distribution, reducing the risk of harm among heavy and other drinkers and, thereby, lowering the aggregated harm. Policies aimed at reducing per capita alcohol consumption are likely an efficient way of preventing people from becoming heavy drinkers, who may cause themselves and others severe health and social problems. For countries with many abstainers and a high proportion of unrecorded alcohol, the usefulness of the per capita alcohol consumption indicator may diminish. However, per capita alcohol consumption remains a valid indicator to compare change over time within a country. Further, this indicator is also cost-effective considering that population survey information about alcohol consumption may be challenging and costly *(6)*.

“To change [alcohol-related harm] we first need to reliably measure it”

Kevin Shield, Centre for Addiction and Mental Health, at the webinar Population-wide interventions for reducing alcohol consumption: what does the per capita consumption indicator say?

The know-how

This section provides examples of country experiences that can be used as evidence and inspiration for what policy approaches may be possible in different settings

Using the alcohol per capita indicator to assess the trajectory of alcohol control policies: the case of the Baltic countries

Estonia, Latvia and Lithuania share similar historical pasts and cultural heritage, including social alcohol consumption behaviours. This includes a tendency to drink strong liquor and beer as opposed to wine. There is also a tendency to a relatively high proportion of binge drinking. In 2004, following their accession to the European Union, the Baltic countries were often visited for cross-border alcohol shopping due to their relatively lower excise taxes. However, after the 2008 financial crisis, the Baltic countries reformed their alcohol control policies, including increasing excise taxes on alcoholic beverages. In 2008, Estonia increased the excise tax on alcohol by 10–20 percentage points and reduced the hours during which alcohol could be sold. The excise tax in Estonia increased steadily over the years onwards. Since 2009, Latvia also increased excise taxes on several occasions. In 2008 and 2009 and 2014 to 2018, Lithuania introduced a comprehensive package of alcohol control policies, including a ban of alcohol sales in petrol stations in 2016, doubling taxation for beer and wine in 2017, restricting advertisements for alcoholic beverages and increasing the legal age for consuming alcohol in 2018 *(10).* Since 2008, a significant decline of the alcohol consumed per capita followed each policy intervention across all three countries. In more recent years, the per capita alcohol consumption has significantly declined in Estonia and Lithuania but increased in Latvia.

Differences between national and international estimates of per capita alcohol consumption: the case of Brazil

In Brazil, national health surveys show an increase in the prevalence of alcohol consumption. For example, the National Adolescent School-based Health survey reports that 63% of adolescents older than 13 years have consumed alcohol. However, global estimates show a reduction in per capita alcohol consumption since 2014 *(11).* The data sources related to the production, import, export and sales of alcohol used to estimate per capita alcohol consumption were examined to explain these differences.

From 2014 to 2018, wine and gin imports increased, cachaça production increased and beer remained stable. The sales of wine, gin and cachaça also increased. The analysis confirmed that the use of international data sources for estimating Brazil's per capita alcohol consumption indicator explains the observed differences in the per capita alcohol consumption indicator. For example, when Brazil's wine production was 250 million litres, international sources reported about half of that for 2016.

The data used to estimate the per capita alcohol consumption are available to the public and results from the collaboration between the Ministry of Health, responsible for estimating the indicator, and the Brazilian Institute of Geography and Statistics. The prevalence of alcohol consumption has been estimated annually since 2016. Brazil uses tax data on production, import, export and sales of alcoholic beverages. This source ensures the reliability of the national data.

The use of reliable national data sources for estimating per capita alcohol consumption enables the scope of the problems derived from alcohol consumption to be better understood and tailored and cost-effective policy interventions designed to solve them. From 2022, Brazil plans to make accessible each year a set of indicators, including alcohol consumption, to further strengthen the surveillance of noncommunicable diseases on the Ministry of Health platform.

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Online course at the *virtual campus* of the Pan American Health Organization

In efforts to increase the collection and use of per capita alcohol consumption as an indicator, the Pan American Health Organization created a virtual learning course focusing on estimating per capita alcohol consumption. The course provides detailed information on the data sources needed to calculate per capita alcohol consumption and how to calculate it based on a tool they developed at the Centre for Addiction and Mental Health in Canada. The learning objectives of the course are to become familiar with the data sources required, to understand the need and value of this indicator and to be able to collate the information that is needed. The course enables participants to convene groups of decision-makers from several sectors of government to determine and report to WHO on the annual per capita consumption of alcohol.

Next steps

This section provides directions to explore to ensure the conversation continues beyond this brief

Tackling the challenges laid out in this brief undoubtedly requires a multi-stakeholder approach with each partner playing to their comparative advantage. However, those best suited to move forward these next steps will be specific to each setting and may differ by country.

Government policy- and decision-makers

Government policy- and decision-makers can learn from the experience of other countries in collecting and monitoring per capita alcohol consumption to determine the success of alcohol control policies. Possible next steps could include:

- where per capita alcohol consumption is not currently used, seeking out training opportunities to better understand the indicator and its development;
- advocating for the implementation and use of per capita alcohol consumption as a nationwide indicator in lieu of relying on indicators collected through surveys or published by industry; and
- working in collaboration with researchers and research institutions to monitor per capita alcohol consumption when implementing alcohol control policies and interventions.

Civil society, community-based organisations, researchers and research institutions

Civil society, community-based organisations, researchers and research institutions have a critical role to play in advancing the widespread use of per capita alcohol consumption indicator, in particular by:

- supporting policy- and decision-makers to understand the use of per capita alcohol consumption indicator, how to calculate it and how it can be used to evaluate alcohol control policies;
- considering ways to improve measurement and estimation of unrecorded alcohol production and consumption to strengthen the accuracy of per capita alcohol consumption as an indicator;
- examining whether industry data can be disaggregated to provide insights into the effects of alcohol policies among sub-groups;
- publishing literature that uses per capita alcohol comparisons as one method to evaluate the effects of alcohol control policies;
- monitoring the characteristics of per capita alcohol consumption as an indicator to ensure that it remains fit for purpose;
- protecting consumer's rights to informed choices; and
- advocating for transparency in the methods used for estimating the per capita alcohol consumption.

Takeaway messages

1. Reducing per capita alcohol consumption leads to less alcohol-related harm among all drinkers.

2. Per capita alcohol consumption is the best available indicator to monitor policies seeking to curb alcohol consumption. It is used for morning many global commitments.

3. WHO has collected data on per capita alcohol consumption at the country level since 1996.

4. The per capita alcohol consumption indicator has consistently shown
   - an association with alcohol harm and mortality;
   - sensitive to variation in the implementation of alcohol control policies;
   - to be an asset for modelling alcohol consumption.

5. Despite its many advantages, the use of the per capita alcohol consumption indicator is not fully exploited.

6. There is a need to regularly monitor the characteristics of the per capita alcohol consumption indicator to ensure it remains fit for purpose.

7. Improving the measurement and estimation of unrecorded alcohol production and consumption will strengthen the accuracy of per capita alcohol consumption indicator.

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World Health Organization

Related WHO resources

WHO alcohol fact sheet

Global Information System on Alcohol and Health

Global alcohol action plan 2022–2030 to strengthen implementation of the Global Strategy to Reduce the Harmful Use of Alcohol

Global developments in alcohol policies: progress in implementation of the WHO strategy to reduce the harmful use of alcohol since 2010.

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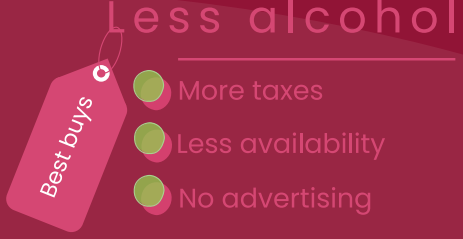

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