

SCALA in the global context. Implementation of screening and brief interventions, costs and benefits

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Two main reasons for alcohol control policy: costs and harm

- Alcohol incurs substantial costs to societies, including in middle-income countries.
- If all cost components were to be considered, the economic costs of alcohol consumption amount to 1306 international dollars (Int\$) per adult per year (95% confidence interval 873–1738), 1872 Int\$ per drinker (95% CI 1279–2466), or equivalent to 2.6% (95% CI 2.0–3.1%) of the gross domestic product.
- Globally, it is estimated that there were 3.0 million (95% UI 2.6–3.6) alcohol-attributable deaths and 131.4 million (119.4–154.4) disability-adjusted life-years (DALYs) in 2016, corresponding to 5.3% (4.6–6.3%) of all deaths and 5.0% (4.6–5.9%) of all DALYs.
- Alcohol use was a major risk factor for communicable, non-communicable, and injury deaths.

Most recent meta-analysis: Manthey et al., 2021
Pharmacoeconomics

Most recent comparative risk assessment based on CRA data: Shield et al., 2020, Lancet Public Health

SAFER

A WORLD FREE FROM ALCOHOL RELATED HARMS

SAFER is a World Health Organization (WHO)-led initiative to reduce death, disease and injuries caused by the harmful use of alcohol using high-impact, evidence-based, cost-effective interventions.

The SAFER action package

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

SAFER initiative

The SAFER initiative includes three interlinked components to support country implementation:

1. WHO action package of effective alcohol policy and programme interventions;
2. WHO/UN-led programme focusing on country action; and
3. Multi-stakeholder communications and advocacy campaign.



Comparative cost-effectiveness of screening and brief interventions with other alcohol policy measures

Based on

Chisholm, D., Moro, D., Bertram, M., Pretorius, C., Gmel, G., Shield, K., & Rehm, J. (2018). **Are the “best buys” for alcohol control still valid? An update on the comparative cost-effectiveness of alcohol control strategies at the global level.** Journal of Studies on Alcohol and Drugs, *79*(4), 514-522. doi:10.15288/jsad.2018.79.514

Interventions modelled (in blue are “best buys”)

- *an increase in excise taxes on alcoholic beverages*

The impact of a 50% increase in excise taxes on alcoholic beverages on consumption was modelled, adjusted for the observed or expected level of unrecorded use due to illicit production and smuggling.

- *enforcement of bans or comprehensive restrictions on exposure to alcohol advertising, promotion and sponsorship* based on a scale where 0 equals no restriction, 1 equals voluntary/self-regulation, 2 equals partial statutory restriction and 3 equals a ban (Cook, Bond and Greenfield, 2014)
- *enforcement of restrictions on the physical availability of retailed alcohol* via reduced hours of sale
- *enforcement of drink-driving laws and blood alcohol concentration limits* via sobriety checkpoints
- *provision of brief psychosocial intervention for persons with hazardous and harmful alcohol use*

Associated costs and resources

- For **individualized interventions** like brief interventions:
 - Identify the level of intervention (e.g., primary health care)
 - Identify the level of time necessary: three contacts of x minutes
 - Identify the next steps referral to outpatient (20%) and to hospital (5%)
 - The resulting cost per treated person was applied to 50% of all prevalent cases of hazardous and harmful alcohol use in the first year (**coverage**) and every fifth year thereafter, while for all other years the cost per case was applied to only half of all **incident** cases (to account for the finite period of treatment effect)
 - Plus program costs necessary

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Intervention	Impact	Comments on evidence
<p>Increase in excise taxes on alcoholic beverages</p>	<p>Impact on prevalence of hazardous and harmful drinking varies according to rates of current tax, (un)recorded use and demand elasticity.</p>	<p>Country-specific rates of excise tax, unrecorded consumption and market distribution for different beverage types extracted from GISAH. Beverage-specific demand elasticities for alcohol, by country income level, based on international reviews (range -0.3 [beer, HIC] to -0.79 [wine and spirits, LMIC]). A 50% increase over current tax rates was modelled.</p>
<p>Enforcement of bans or comprehensive restrictions on exposure to alcohol advertising, promotion and sponsorship (across multiple types of media)</p>	<p>1.2% reduction in prevalence.</p>	<p>Change in prevalence simulated for each world region on basis of estimated change in total drinking volume, based on cross-sectional analyses of data from 15 LAMICs, which found an inverse association between increased marketing restrictions and total drinking volume</p>
<p>Enforcement of restrictions on the physical availability of retailed alcohol (via reduced hours of sale)</p>	<p>1.8-2.1% (male), 4% (female) reduction in prevalence.</p>	<p>Change in prevalence simulated for each world region on basis of estimated change in total drinking volume, based on cross-sectional analyses of data from 15 LAMICs, which found an inverse association between increased restrictions on business hours for off-premises alcohol sales and total drinking volume (-0.88).</p>

Intervention	Impact	Comments on evidence
<p>Enforcement of drink-driving laws and blood alcohol concentration limits via sobriety checkpoints</p>	<p>15-20% reduction in alcohol-attributable years lived with disability (YLD) and road traffic deaths, respectively.</p>	<p>Effect size applied to estimated deaths and YLD for road traffic injuries due to drink-driving (data for which are available at regional and country level)</p>
<p>Provision of brief psychosocial intervention for persons with hazardous and harmful alcohol use</p>	<p>Prevalence reduction (at full coverage) varies by age, sex and region (0% [female, 15-59 years], 11-17% [female, 60+ years], 13-21% [male, 15-59 years], 6-11% [males, 60+ years]).</p>	<p>Intervention coverage modelled at 50%. Change in prevalence simulated for each world region on basis of estimated change in consumption (3.6 drinks per week less) and heavy episodic drinking (12% less, Jonas et al., 2012). Reduction in disability weight also estimated as proportion of harmful use decreases (0.8-2.7%).</p>

Key reference for screening and brief intervention:

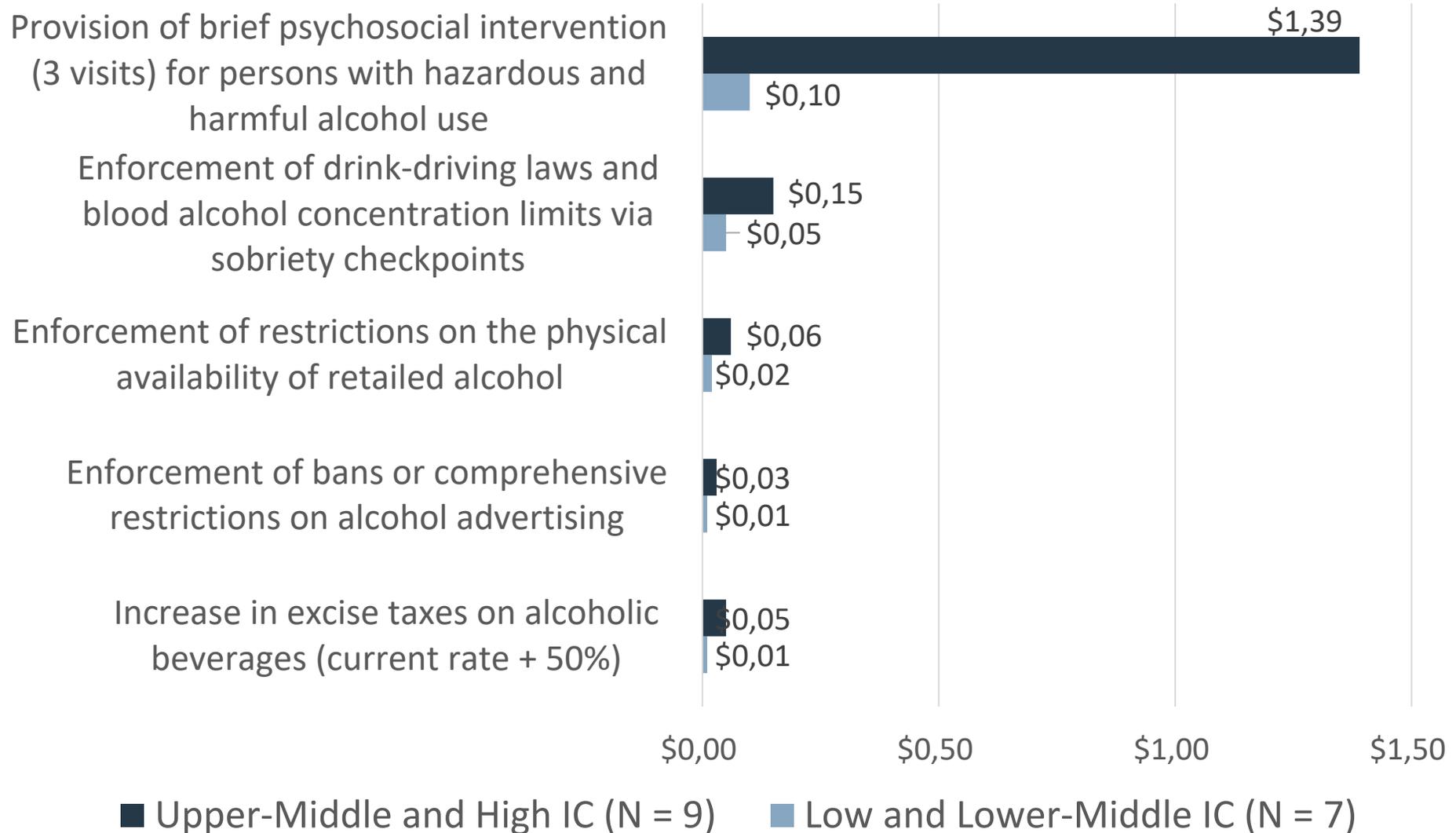
Jonas, D. E., Garbutt, J. C., Brown, J. M., Amick, H. R., Brownley, K. A., Council, C. L., . . . Harris, R. P. (2012). *Screening, behavioral counseling, and referral in primary care to reduce alcohol misuse*. Rockville, MD: Agency for Healthcare Research and Quality.

Similar results in various meta-analyses (Kaner et al., 2007; 2019)

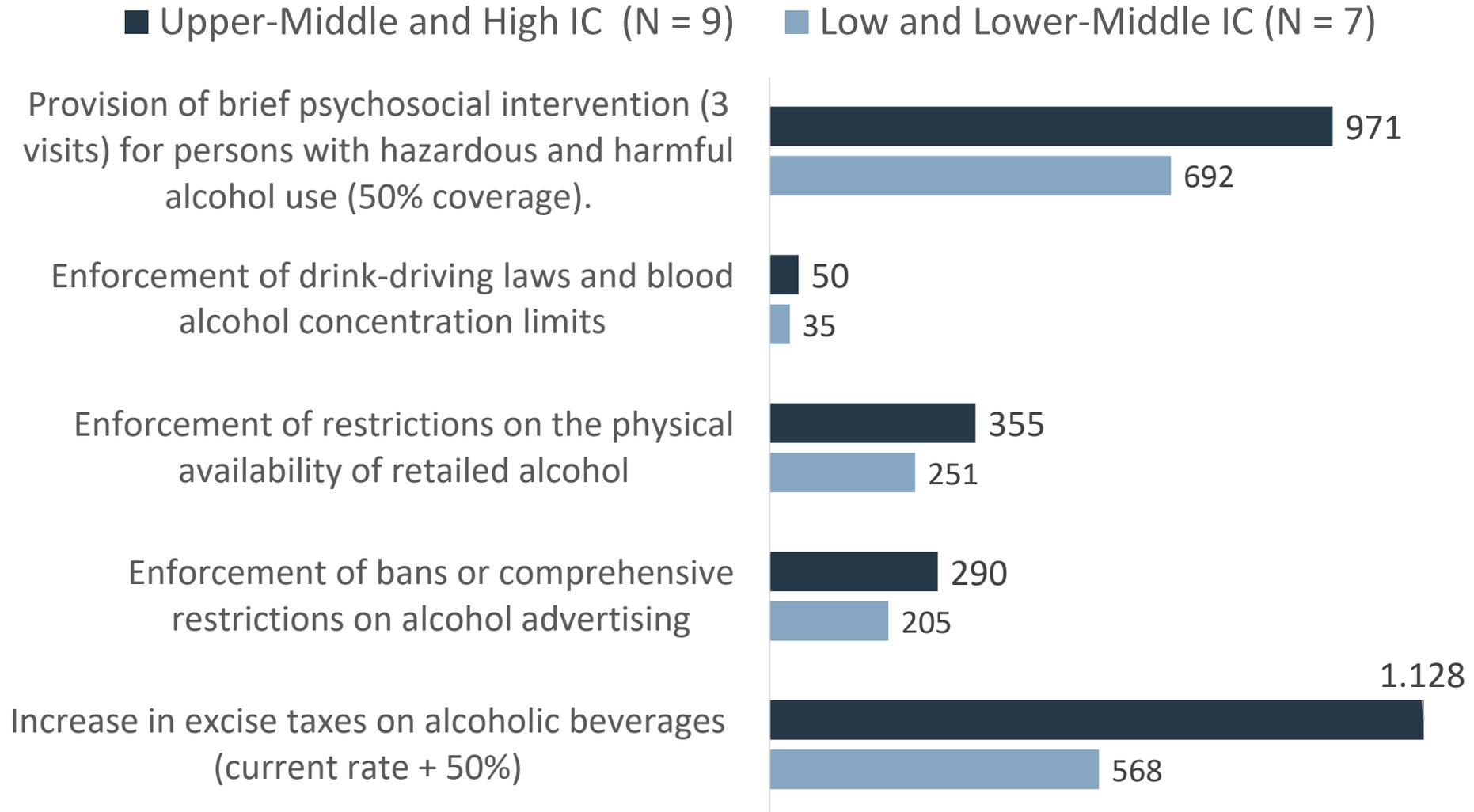
Comparators modelled:

- Taxation: many meta-analyses with similar results
- Availability, marketing: Cook et al., 2014 (Addiction)
- Drink-driving: meta-analysis (Elvik et al., 2009)

Economic cost of implementation per year (I\$ per capita)



Health impact per year (healthy life years gained per 1 million)



Average cost-effectiveness ratio (I\$ / healthy life year gained)

Intervention	Low and Lower-Middle IC (N = 7)	Upper-Middle and High IC (N = 9)
Increase in excise taxes on alcoholic beverages (current rate + 50%)	\$22	\$41
Enforcement of bans or comprehensive restrictions on alcohol advertising	\$48	\$120
Enforcement of restrictions on the physical availability of retailed alcohol	\$77	\$181
Enforcement of drink-driving laws and blood alcohol concentration limits	\$1,454	\$2,979
Provision of brief psychosocial intervention (3 visits) for persons with hazardous and harmful alcohol use	\$143	\$1,434

Conclusions of Chisholm et al., 2018

More than a decade after an initial global analysis, the findings of this study indicate pricing policies and restrictions to alcohol availability and marketing continue to represent a highly cost-effective use of resources. (*J. Stud. Alcohol Drugs*, 79, 514–522, 2018).

But are they actually implemented!

For better examples, SCALA has developed methodology to measure return on investment!