

Appendix A. **Supplementary details relating to the conceptual framework of the Toolkit for Evaluating Alcohol policy Stringency and Enforcement (TEASE-16)**

The TEASE-16 and the Alcohol Policy Index: Important differences between the tools

The Toolkit for Evaluating Alcohol policy Stringency and Enforcement (TEASE-16) measures stringency and enforcement of 16 evidence-based alcohol control policies. The tool builds upon Brand et al.'s¹ Alcohol Policy Index (API) scale but they are distinguished by a number of important differences.

Policies: In terms of policy conceptualization, whereas the API enquired about the number (0, 1, 2, 3) of media outlets (print, broadcast, billboards) with advertising restrictions, the TEASE-16 enquires about the level of restrictions imposed upon the majority of alcohol advertising mediums (no restrictions, industry self-regulation, partial statutory restrictions, or a ban). We defined advertising mediums as including national/cable television, national/local radio, billboards, cinema, internet, point-of-sale promotions, and print media. This revised format is expected to better reflect advertising regulations and take into account the spectrum of advertising mediums. The second change concerns penalties for exceeding the legal blood alcohol concentration limit. Here, the API rated stringency according to fine versus suspension. To better reflect the range of punitive sanctions, the TEASE-16 enquired about the number of mandatory penalties a country imposes for exceeding the legal blood alcohol concentration limit (no penalty, fine, penalty points, license suspension/disqualification, imprisonment for repeat offenders, other). The category 'other' included less prevalent sanctions such as alcohol ignition interlocks, caning, forced labour, and/or education programs.

Effectiveness ratings: The API assigned a rating to each of the 16 policy topics indicating its effectiveness in reducing the adverse effects of alcohol: three-stars, two-stars, and one-star reflect high, moderate and limited effectiveness respectively. Ratings were based on expert reviews by Babor et al. conducted in 2003.² The TEASE-16 used the most recent review by the same experts,³ resulting in two changes: alcohol server liability decreased to two-stars and mandatory training of bar staff to manage aggression increased to two-stars.

Enforcement: Most alcohol policy tools of this kind have largely ignored or only partially assessed enforcement. The TEASE-16 is the first tool of this kind to comprehensively assess enforcement. Enforcement is a critical component of policy evaluation and may vary considerably across policy topics, regulatory domains,

and countries.⁴ For example, if a given country has a legal alcohol purchase age of 21 years (i.e., high stringency) but alcohol retailers largely fail in practice to ask customers for age verification (i.e., poor enforcement), overall the jurisdiction is poorly controlling the physical availability of alcohol to young people compared to a country with a low purchase age but stricter enforcement. For this reason, the TEASE-16 enquires about level of enforcement for each policy topic under investigation.

Level of enforcement will be rated using three self-reported (by relevant public health and government officials in the relevant country) categories: (i) rarely or poorly enforced/no legislation in place/no enforceable powers; (ii) limited/enforced occasionally/enforced when violations are reported or are blatant; or (iii) widely enforced. Of note, enforcement of policies in the alcohol prices domain was evaluated using a proxy: estimated level of unrecorded alcohol consumption⁵. This was based on the rationale that unrecorded consumption undermines the effectiveness of alcohol prices if products are sold at lower prices or available at times and places when commercial alcohol is not.⁶

Weighting schemes used to derive alcohol policy scores

Weights and proportionate points values for the alternative weighting schemes using 50:50 policy stringency-enforcement combination.

Effectiveness	Number of topics	Weight	Weight X Topic	Proportionate point value per policy topic	Maximum number of points available				
Baseline weighting (50:50 combination): Stringency									
*	2	1	2	1.32	2.63				
**	6	2	12	2.63	15.79				
***	8	3	24	3.95	31.58				
					50.00				
Baseline weighting (50:50 combination): Enforcement									
*	2	1	2	1.32	2.63				
**	6	2	12	2.63	15.79				
***	8	3	24	3.95	31.58				
					50.00				
Heavy weighting (50:50 combination): Stringency									
*	2	1	2	0.83	1.67				
**	6	2	18	2.50	15.00				
***	8	3	40	4.17	33.33				
					50.00				
Heavy weighting (50:50 combination): Enforcement									
*	2	1	2	0.83	1.67				
**	6	2	18	2.50	15.00				
***	8	3	40	4.17	33.33				
					50.00				
Equal weighting (50:50 combination): Stringency									
*	2	1	2	3.13	6.25				
**	6	1	6	3.13	18.75				
***	8	1	8	3.13	50.00				
					50.00				
Equal weighting (50:50 combination): Enforcement									
*	2	1	2	3.13	6.25				
**	6	1	6	3.13	18.75				
***	8	1	8	3.13	25.00				
					50.00				
Country-specific (50:50 combination)									
Effectiveness	Australia	China	Hong Kong	Japan	Malaysia	New Zealand	Philippines	Singapore	Vietnam
*	1.59	0.36	3.13	0.36	3.13	0.36	0.36	3.13	3.13
**	2.71	2.37	3.13	2.37	3.13	2.37	2.37	3.13	3.13
***	3.82	4.38	3.13	4.38	3.13	4.38	4.38	3.13	3.13

Weights and proportionate points values for the four alternative weighting schemes using 25:75 policy stringency-enforcement combination.

Effectiveness	Number of topics	Weight	Weight X Topic	Proportionate point value per policy topic	Maximum number of points available				
Baseline weighting (25:75 combination): Stringency									
*	2	1	2	0.88	1.75				
**	6	2	12	1.75	10.53				
***	8	3	24	2.63	21.05				
					33.33				
Baseline weighting (25:75 combination): Enforcement									
*	2	1	2	1.75	3.51				
**	6	2	12	3.51	21.05				
***	8	3	24	5.26	42.11				
					66.67				
Heavy weighting (25:75 combination): Stringency									
*	2	1	2	0.56	1.11				
**	6	3	18	1.67	10.00				
***	8	5	40	2.78	22.22				
					33.33				
Heavy weighting (25:75 combination): Enforcement									
*	2	1	2	1.11	2.22				
**	6	3	18	3.33	20.00				
***	8	5	40	5.56	44.44				
					66.67				
Equal weighting (25:75 combination): Stringency									
*	2	1	2	2.08	4.17				
**	6	1	6	2.08	12.50				
***	8	1	8	2.08	16.67				
					33.33				
Equal weighting (25:75 combination): Enforcement									
*	2	1	2	4.17	8.33				
**	6	1	6	4.17	25.00				
***	8	1	8	4.17	33.33				
					66.67				
Country-specific (25:75 combination)									
Effectiveness	Australia	China	Hong Kong	Japan	Malaysia	New Zealand	Philippines	Singapore	Vietnam
*	3.34	0.73	6.20	0.73	6.20	0.73	0.73	6.25	6.25
**	5.46	4.71	6.20	4.71	6.20	4.71	4.71	6.25	6.25
***	7.57	8.78	6.30	8.79	6.30	8.79	8.79	6.25	6.25

Weights and proportionate points values for the four alternative weighting schemes using multiplicative policy stringency-enforcement combination.

Proportionate point values for policy stringency are presented below.

Effectiveness	Number of topics	Weight	Weight X Topic	Proportionate point value per policy topic	Maximum number of points available
<i>Baseline weighting (multiplicative combination): Stringency</i>					
*	2	1	2	2.63	5.26
**	6	2	12	5.26	31.58
***	8	3	24	7.89	63.16
					100.00
<i>Heavy weighting (multiplicative combination): Stringency</i>					
*	2	1	2	1.67	3.33
**	6	3	18	5.00	30.00
**	8	5	40	8.33	66.67
					100.00
<i>Equal weighting (multiplicative combination): Stringency</i>					
*	2	1	2	6.25	12.50
**	6	1	6	6.25	37.50
***	8	1	8	6.25	50.00
					100.00

Proportionate point values for level of policy enforcement are presented below. Points varied depending on whether the policy topic had two, three, four, or five response categories.

Level of policy enforcement	Level of policy stringency: 2 policy levels	
	0	1
1	0	0.33
2	0	0.67
3	0	1.00

Level of policy enforcement	Level of policy stringency: 3 policy levels		
	0	1	2
1	0	0.17	0.33
2	0	0.33	0.67
3	0	0.50	1.00

Level of policy enforcement	Level of policy stringency: 4 policy levels			
	0	1	2	3
1	0	0.11	0.22	0.33
2	0	0.22	0.44	0.67
3	0	0.33	0.67	1.00

Level of policy enforcement	Level of policy stringency: 5 policy levels				
	0	1	2	3	4
1	0	0.08	0.17	0.25	0.33
2	0	0.17	0.33	0.50	0.67
3	0	0.25	0.50	0.75	1.00

Effectiveness	<i>Country-specific (multiplicative stringency-enforcement combination)</i>								
	Australia	China	Hong Kong	Japan	Malaysia	New Zealand	Philippines	Singapore	Vietnam
*	0.60	0.96	3.50	0.96	3.50	1.38	0.96	2.65	6.25
**	7.06	0.96	3.50	0.96	3.50	3.07	0.96	3.56	6.25
***	7.06	11.54	9.00	11.54	9.00	9.86	11.54	9.16	6.25

References

1. Brand DA, Saisana M, Rynn LA, Pennoni F, Lowenfels AB. Comparative analysis of alcohol control policies in 30 countries. *PLoS Med* 2007; 4: e151.
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6. World Health Organization Regional Office for the Western Pacific. Western Pacific Regional Strategy to reduce alcohol-related harm. How to develop an action plan to implement the strategy. Manila: World Health Organization Regional Office for the Western Pacific, 2007.