### Alcoholic beverages – no ordinary food commodities

V. Poznyak, MD, PhD

Coordinator, Management of Substance Abuse Department of Mental Health and Substance Abuse

Codex Committee on Food Labelling 17 October 2017 Asuncion, Paraguay



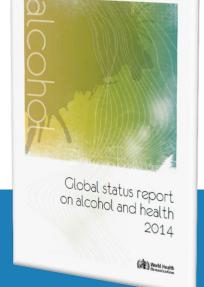
#### Content

- Alcohol beverage consumption in the world: levels, patterns, indicators
- Alcohol and health: risks, consequences of alcohol use, alcohol-attributable disease burden
- Main international policy frameworks and effective strategies and interventions to reduce the harmful use of alcohol
- Role of alcoholic beverage labelling in reducing the harmful use of alcohol: current practices and main issues
- Proposed new work for consideration of CCFL

## Alcohol Beverage Consumption in the World: levels, patterns and indicators

#### Alcohol beverage consumption in the world

- Alcohol: ~1.9 billion people aged 15+ consumed alcoholic beverages in the last 12 months (estimates for 2012; WHO, 2014)
  - ~40% of the world population aged 15-64
    - 48% of men 15+ years old
    - 29% of women 15+ years old
- ~ 60% of the world adult population did not consume alcohol in the last 12 months
  - Lifetime abstainers
  - Former drinkers



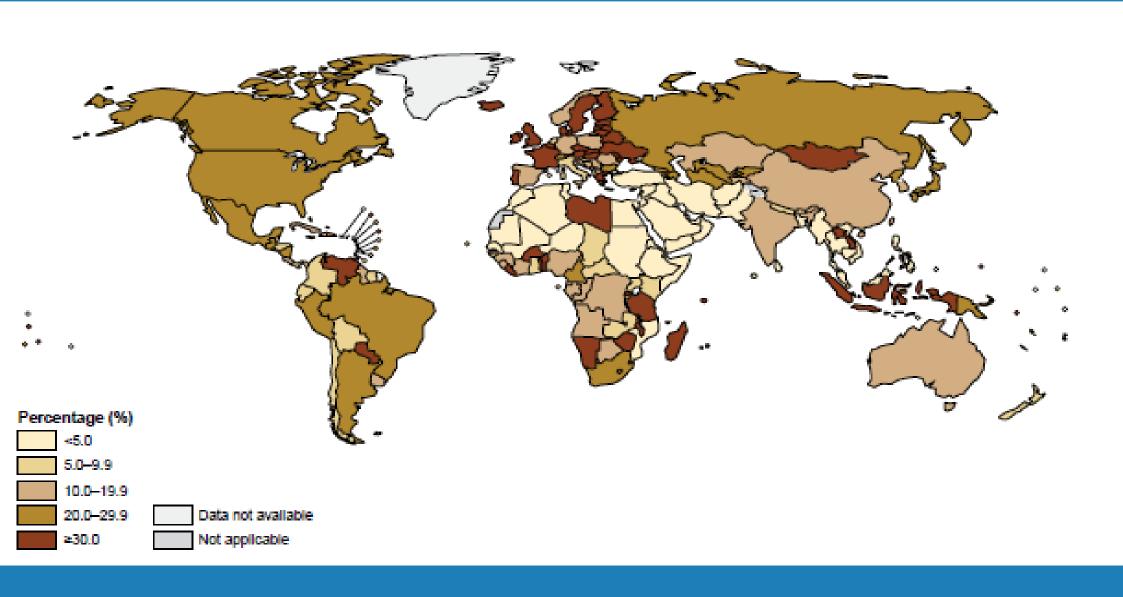
### Patterns of alcohol consumption and health risks

- Episodic low-level alcohol consumption
- Continuous low-level alcohol consumption
- Episodic high level alcohol consumption ("Heavy episodic drinking", "Binge drinking")
- Continuous high-level alcohol consumption
- Episodic or continuous high level alcohol consumption in alcohol dependence (alcoholism) with impaired control over the level, pattern and context of alcohol consumption.

### Indicators for alcohol consumption at population level

- Per capita alcohol consumption among 15 years of age and older (15+) in litres of pure alcohol per person per year
- Prevalence of life-time drinkers / Prevalence of life-time abstainers
- Prevalence of past 12-month drinking alcohol / Prevalence of past 12-month abstainers ("former drinkers")
- Per capita consumption (15+ years old) in litres of pure alcohol per drinker
- Prevalence of heavy episodic drinking (60 grams of pure alcohol at least once in a month)

#### Prevalence of heavy episodic drinking among current drinkers (%, 15+), 2010 (WHO, 2014)

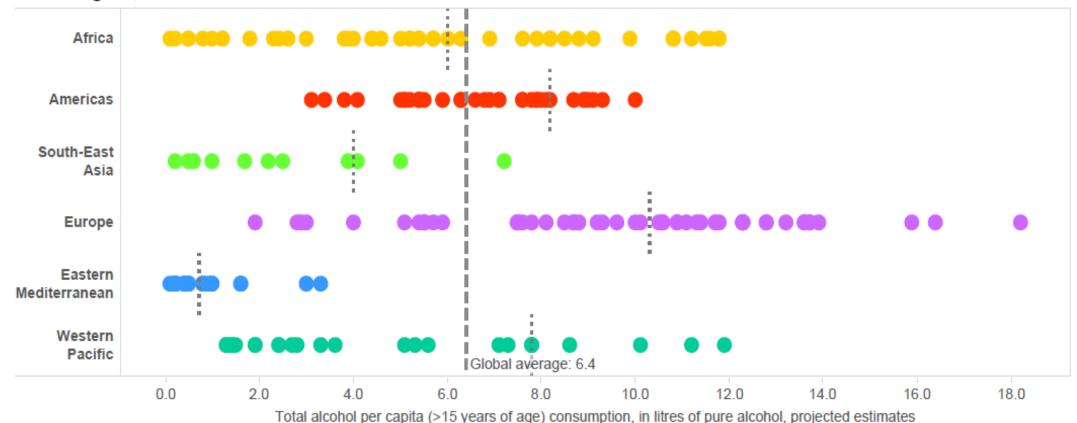


### Proportion (%) of recorded alcohol per capita (15+ years) consumption by type of alcoholic beverage



#### Alcohol consumption globally in 2016

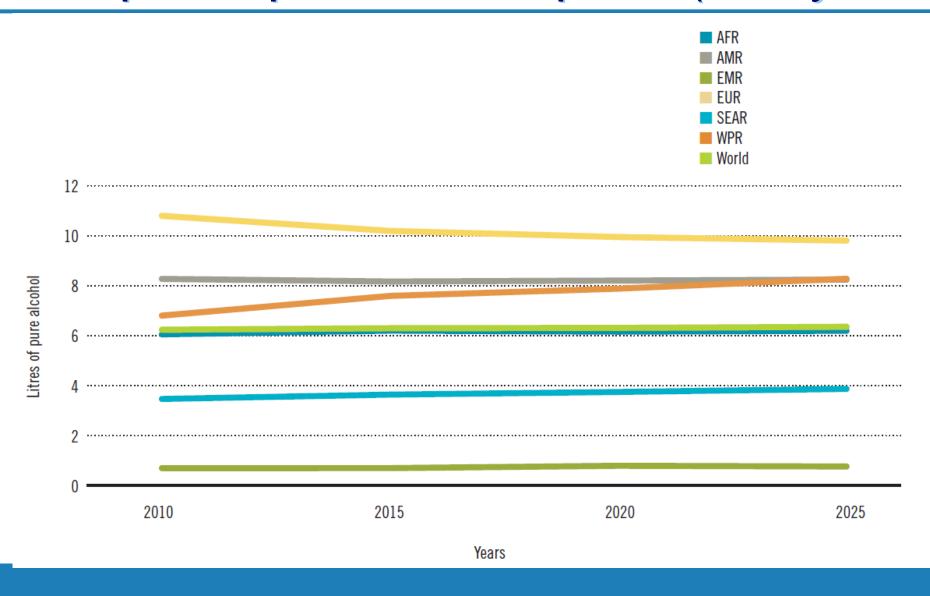
Total alcohol per capita (>15 years of age) consumption (litres of pure alcohol), projected estimates, by WHO region, 2016



Source: WHO World Health Statistics 2017

http://www.who.int/gho/publications/world\_health\_statistics/2017

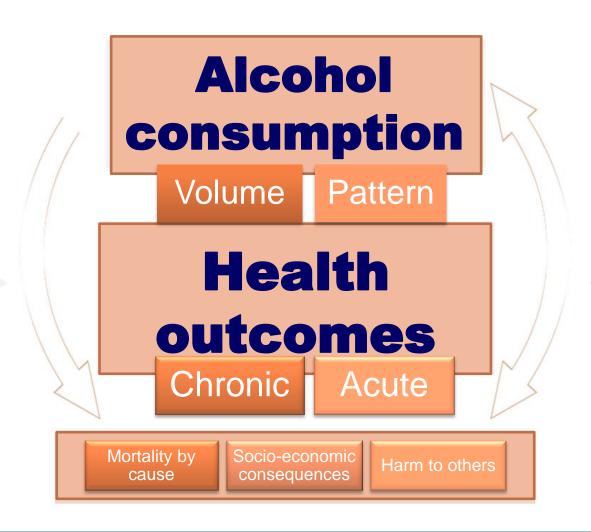
### Trends in total (recorded and unrecorded) alcohol per capita consumption (15+ yeas old)

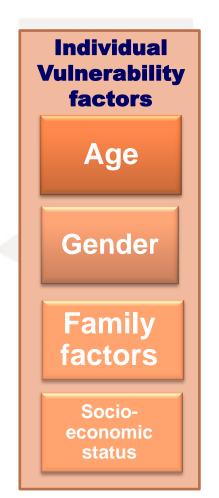


# Alcohol and health: risks, consequences of alcohol use, alcohol-attributable disease burden

### Conceptual causal model of alcohol consumption and health outcomes



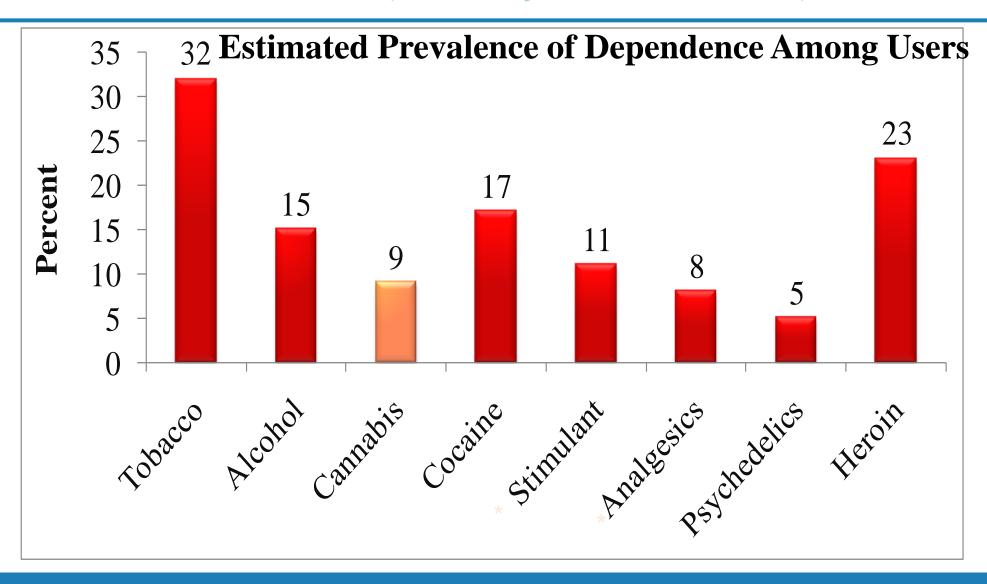




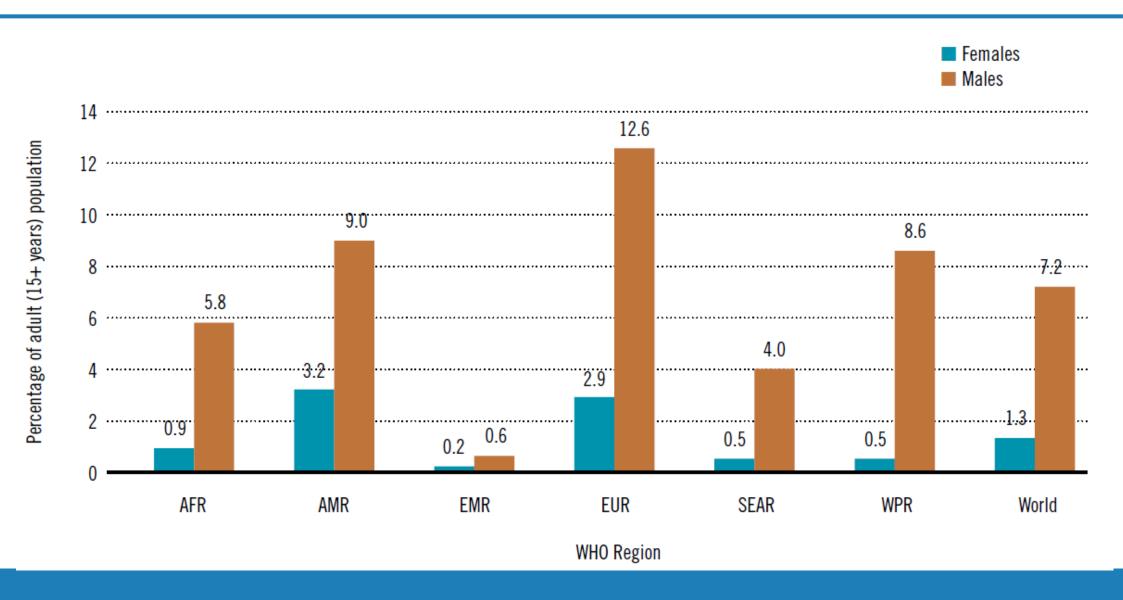
### Ethanol (ethyl alcohol) – key ingredient of alcoholic beverages

- Psychoactive substance that produce its psychoactive effects through known neurobiological mechanisms (may result in alcohol intoxication of different severity)
- Toxic substance with significant toxic effects on tissues and organs in living organisms (low threshold for lethal overdose due to respiratory depression and overall neurotoxicity)
- Teratogenic substance known to cause congenital abnormalities and Fetal Alcohol Syndrome (FAS)
- Cancerogenic substance known to be a contribution factor ro development of several cancers in humans
- Alcohol dependence-producing substance.

### Dependence potential of different psychoactive substances (Anthony JC et al, 1994)



#### Prevalence (%) of alcohol use disorders (AUDs, ICD-10) by sex, WHO region and the world, 2010 (WHO, 2014)



#### IARC Monograph on the Evaluation of Carcinogenic Risks to Humans, Vol. 100E (2012)

- There is sufficient evidence in humans for the carcinogenicity of alcohol consumption
- Alcohol consumption causes cancers of the oral cavity, pharynx, larynx, esophagus, colorectum, liver (hepatocellular carcinoma) and female breast. Also, an association has been observed between alcohol consumption and cancer of the pancreas.
- There is sufficient evidence in humans for the carcinogenicity of acetaldehyde associated with the consumption of alcoholic beverages.

#### Alcohol-attributable fractions for selected causes of death, disease and injury, 2012 (WHO, 2014)

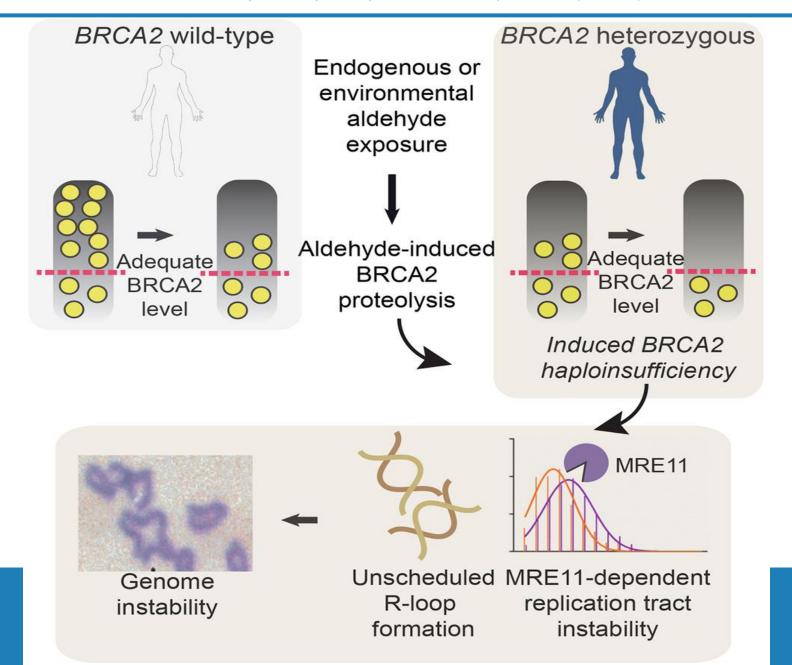
All global deaths/DAL	Ys	
<ul><li>Liver cirrhosis</li></ul>	50/50	
<ul><li>Oral cavity and pharynx cancers</li></ul>	30/31	
<ul><li>Pancreatitis</li></ul>	25/27	
<ul><li>Laryngeal cancer</li></ul>	23/24	
<ul><li>Oesophageal cancer</li></ul>	22/23	
<ul><li>Liver cancer</li></ul>	12/12	
<ul><li>Haemorrhagic stroke</li></ul>	11/11	
<ul><li>Colorectal cancer</li></ul>	10/10	
<ul> <li>Hypertensive heart disease</li> </ul>	8/10	
<ul><li>Breast cancer</li></ul>	8/8	

Ischaemic heart disease

7/5

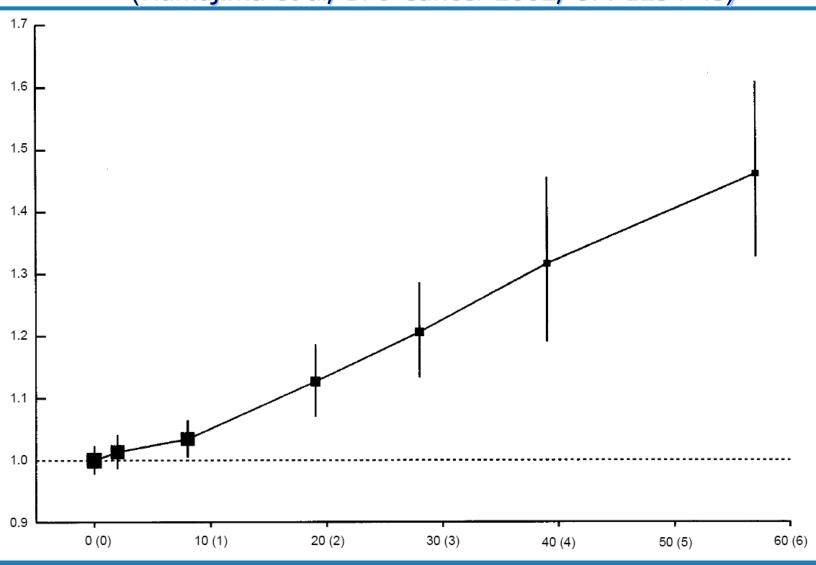
#### Genes-modified carcinogenic effects of aldehydes for breast cancers

(Shawn Lu Wen Tan et al, 2017; *Cell*, Volume 169, Issue 6, 2017, 1105–1118.e15)



#### Dose-response relationship between alcohol consumption and the risk of female breast cancer

(Hamajima et al, Br J Cancer 2002; 87: 1234-45)



### Teratogenic effects of alcohol confirmed in animal models

Soon after the identification of FAS, it was confirmed that alcohol was a teratogen in animal models ranging from mice and rats to dogs, miniature swine, and primates.

These models were important because case reports were confounded by numerous variables that could not be controlled.



### Dose-response relationship (RR) for alcohol and cardiovascular diseases (2)

- Hypertensive disease (Taylor et al, 2009)
  - Men: 25 g/day: 1.25 (1.28-1.47), 50 g/day: 1.62 (1.46-1.81);
  - Women: <5 g/day: 0.82 (0.73-0.93); 25 g/day: 1.24 (0.87-1.77), 50 g/day: 1.81 (1.13-2.90)</li>
- Haemorrhagic and other non-ischaemic stroke (Reynolds et al, 2003):
  - <12 g/day: 0.79 (0.60-1.05); 12-24 g/day: 0.98 (0.77-1.25); 24-60 g/day: 1.19 (0.80 -1.79); > 60 g/day: 2.18 (1.48-3.20).

#### **RESEARCH ARTICLE**

**Open Access** 



#### Differing association of alcohol consumption with different stroke types: a systematic review and meta-analysis

Susanna C. Larsson<sup>1,2\*</sup>, Alice Wallin<sup>1</sup>, Alicja Wolk<sup>1</sup> and Hugh S. Markus<sup>2</sup>

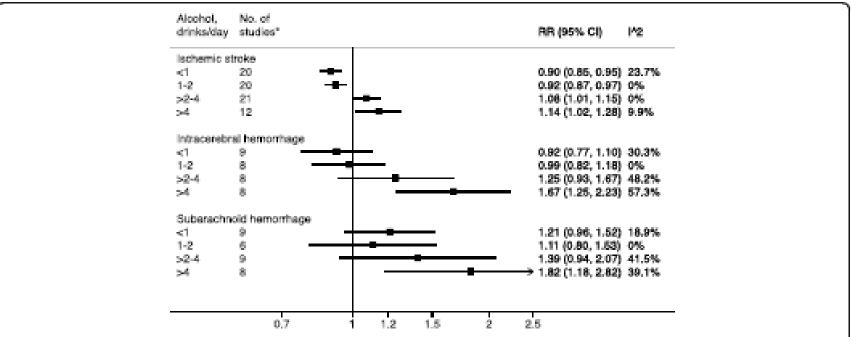
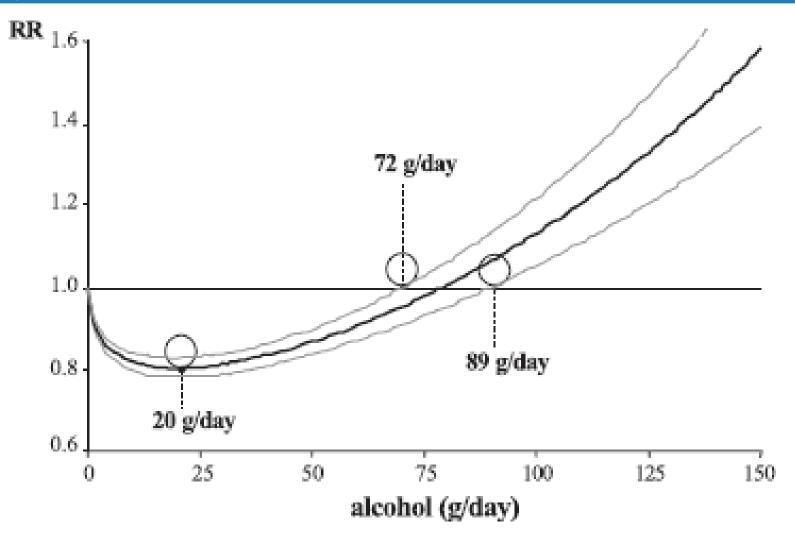


Fig. 1 Overall relative risks (RR) with 95 % confidence intervals (CI) for the associations of alcohol consumption (average number of drinks per day) with risk of ischemic stroke, intracerebral hemorrhage, and subarachnoid hemorrhage. Number of studies that contributed data to each category of alcohol consumption and stroke type. I<sup>2</sup> values < 30 %, 30-75 %, and > 75 % were interpreted as no or low heterogeneity, moderate heterogeneity, and notable heterogeneity, respectively

#### Dose-response relationship between alcohol consumption and the risk of coronary heart disease

(Corrao et al, *Preventive Medicine*, 2004, 38, 5, 613-619)



### Dose-response relationship (RR) for alcohol and cardiovascular diseases (1)

- Ischaemic heart disease (Corrao et al, 2000)
  - Men: 25 g/day nadir: 0.75 (0.73-0.77); deleterious at 113 g/day:
     1.08 (1.00-1.16)
  - Heavy drinking occasions (> 60 g per occasion): 1.45 (1.24-1.70) compared no non-heavy drinking occasions (Roerecke et Rehm, 2010).
- Ischaemic stroke (Reynolds et al, 2003)
  - <12 g/day: 0.80 (0.67-0.96); 12-24 g/day: 0.72 (0.57-0.91); 24-60 g/day: 0.96 (0.79-1.18); > 60 g/day: 1.69 (1.34-2.15);
- Hazardous patterns of drinking negate potential beneficial effects of low-risk alcohol consumption

#### Do "Moderate" Drinkers Have Reduced Mortality Risk? A Systematic Review and Meta-Analysis of Alcohol **Consumption and All-Cause Mortality**

TIM STOCKWELL, Ph.D., a.d \* JINHUI ZHAO, Ph.D., SAPNA PANWAR, M.S., AUDRA ROEMER, M.Sc., a TIMOTHY NAIMI, M.D., C & TANYA CHIKRITZHS, PH.D. b,d

<sup>a</sup>Centre for Addictions Research of BC, University of Victoria, Victoria, British Columbia, Canada

ABSTRACT. Objective: Previous meta-analyses of cohort studies indicate a J-shaped relationship between alcohol consumption and allcause mortality, with reduced risk for low-volume drinkers. However, low-volume drinkers may appear healthy only because the "abstainers" with whom they are compared are biased toward ill health. The purpose of this study was to determine whether misclassifying former and occasional drinkers as abstainers and other potentially confounding study characteristics underlie observed positive health outcomes for lowvolume drinkers in prospective studies of all-cause mortality. Method: A systematic review and meta-regression analysis of studies investigating alcohol use and mortality risk after controlling for quality-related study characteristics was conducted in a population of 3,998,626 individuals, among whom 367,103 deaths were recorded. Results: Without adjustment, meta-analysis of all 87 included studies replicated the classic J-shaped curve, with low-volume drinkers (1.3-24.9 g ethanol per day) having reduced mortality risk (RR = 0.86, 95% CI [0.83, 0.90]).

Occasional drinkers (<1.3 g per day) had similar mortality risk (RR = 0.84, 95% CI [0.79, 0.89]), and former drinkers had elevated risk (RR = 1.22, 95% CI [1.14, 1.31]). After adjustment for abstainer biases and quality-related study characteristics, no significant reduction in mortality risk was observed for low-volume drinkers (RR = 0.97, 95% CI [0.88, 1.07]). Analyses of higher-quality bias-free studies also failed to find reduced mortality risk for low-volume alcohol drinkers. Risk estimates for occasional drinkers were similar to those for low- and medium-volume drinkers. Conclusions: Estimates of mortality risk from alcohol are significantly altered by study design and characteristics. Meta-analyses adjusting for these factors find that low-volume alcohol consumption has no net mortality benefit compared with lifetime abstention or occasional drinking. These findings have implications for public policy, the formulation of low-risk drinking guidelines, and future research on alcohol and health. (J. Stud. Alcohol Drugs, 77, 185-198, 2016)

Journals of Gerontology: Social Sciences



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#### **Brief Report**

#### The "Health Benefits" of Moderate Drinking in Older Adults may be Better Explained by Socioeconomic Status

Andy Towers, 1 Michael Philipp, 2 Patrick Dulin, 3 and Joanne Allen 2

<sup>1</sup>School of Public Health, Massey University, Palmerston North, New Zealand, <sup>2</sup>School of Psychology, Massey University, Palmerston North, New Zealand. 3Department of Psychology, University of Alaska, Anchorage.

#### Alcohol consumption and cardiovascular disease, cancer, injury, admission to hospital, and mortality: a prospective cohort study



Andrew Smyth, Koon KTeo, Sumathy Rangarajan, Martin O'Donnell, Xiaohe Zhang, Punam Rang, Darryl P Leong, Gilles Dagenais, Pamela Seron, Annika Rosengren, Aletta E Schutte, Patricio Lopez-Jaramilla, Ayetkin Oquz, Jephat Chifamba, Rafael Diaz, Scott Lear, Alvaro Avezum, Rajesh Kumar, Viswanathan Mohan, Andrzej Szuba, Li Wei, Wanq Yanq, Bo Jian, Martin McKee, Salim Yusuf, on behalf of the PURE Investigators\*

#### Summary

Background Alcohol consumption is proposed to be the third most important modifiable risk factor for death and Loncer 2015; 386: 1945-54 disability. However, alcohol consumption has been associated with both benefits and harms, and previous studies were mostly done in high-income countries. We investigated associations between alcohol consumption and outcomes in a prospective cohort of countries at different economic levels in five continents.

Methods We included information from 12 countries participating in the Prospective Urban Rural Epidemiological (PURE) study, a prospective cohort study of individuals aged 35-70 years. We used Cox proportional hazards regression to study associations with mortality (n=2723), cardiovascular disease (n=2742), myocardial infarction (n=979), stroke (n=817), alcohol-related cancer (n=764), injury (n=824), admission to hospital (n=8786), and for a composite of these outcomes (n=11963).

Findings We included 114970 adults, of whom 12904 (11%) were from high-income countries (HICs), 24408 (21%) were from upper-middle-income countries (UMICs), 48845 (43%) were from lower-middle-income countries (LMICs), and 28 813 (25%) were from low-income countries (LICs). Median follow-up was 4.3 years (IQR 3.0-6.0). PRanaMI, DP Leong Phil, Current drinking was reported by 36 030 (31%) individuals, and was associated with reduced myocardial infarction (hazard ratio [HR] 0.76 [95% CI 0.63-0.93]), but increased alcohol-related cancers (HR 1.51 [1.22-1.89]) and injury (HR 1-29 [1-04-1-61]). High intake was associated with increased mortality (HR 1-31 [1-04-1-66]). Compared with never drinkers, we identified significantly reduced hazards for the composite outcome for current drinkers in HICs and UMICs (HR 0 · 84 [0 · 77-0 · 92]), but not in LMICs and LICs, for which we identified no reductions in this outcome (HR 1-07 [0-95-1-21]; p<sub>ineractor</sub><0-0001).

Interpretation Current alcohol consumption had differing associations by clinical outcome, and differing associations by income region. However, we identified sufficient commonalities to support global health strategies and national initiatives to reduce harmful alcohol use.

Funding Population Health Research Institute, the Canadian Institutes of Health Research, Heart and Stroke Foundation of Ontario, AstraZeneca (Canada), Sanofi-Aventis (France and Canada), Boehringer Ingelheim (Germany and Canada), Servier, GlaxoSmithKline, Novartis, King Pharma, and national or local organisations in participating countries.

http://dx.dol.org/10.1016/ 50140-6736(15)00235-4

See Comment page 1922

See appendix for full list of

Institute, McMaster Universit and Hamilton Health Science Hamilton, ON, Canada (A Smyth PhD, Prof K K Teo PhD S Rangarajan MSc, Prof S Yusuf DPhil); Health Research Board Clinical Research Facility Galway, National University of Irelan Galway Galway Ireland Universitaire de Cardiologie et de Pneumologic de Quebec, Universitaire Laval, Quebec (Prof G Dagenals MD): Faculta de Medicina, Universidad de La Frontera, Manuel Montt, Chik (P Seron MSc); Sahlgrenska University Hospital and Östra Hospital, Diagnosvägen, (Prof A Rosengren PhD);

Hymertension in Africa

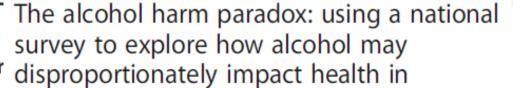
Bellis et al. BMC Public Health (2016) 16:111 DOI 10.1186/s12889-016-2766-x

BMC Public Health

#### RESEARCH ARTICLE

deprived individuals

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Mark A. Bellis 1,2,3\*, Karen Hughes3, James Nicholls47, Nick Sheron5, Ian Gilmore6 and Lisa Jones3

bInstitute for Scientific Analysis, San Francisco, California

<sup>&</sup>lt;sup>c</sup>Boston University Schools of Medicine and Public Health, Boston, Massachusetts

<sup>&</sup>lt;sup>d</sup>National Drug Research Institute, Curtin University, Perth, WA 6845, Australia

### Alcohol per capita alcohol consumption among drinkers 15+ years old in the world

- ~ 17 litres of pure alcohol per drinker
  - ~ 21 litres among men
  - ~ 8 litres among women)
- Equal to ~ 40 g/day of pure alcohol
- Men ~ 30-60 g per day in different WHO regions
- Women ~ 10-30 g per day in different WHO regions.

#### Alcohol and lower respiratory infections

#### Addiction



MONOGRAPH

doi:10.1111/j.1360-0443.2010.02899.x

#### The relation between different dimensions of alcohol consumption and burden of disease: an overview

Jürgen Rehm<sup>1,2,3</sup>, Dolly Baliunas<sup>1,2</sup>, Guilherme L. G. Borges<sup>4</sup>, Kathryn Graham<sup>1,5,6</sup>, Hyacinth Irving<sup>1</sup>, Tara Kehoe<sup>1</sup>, Charles D. Parry<sup>7,8</sup>, Jayadeep Patra<sup>1</sup>, Svetlana Popova<sup>1,2,9</sup>, Vladimir Poznyak<sup>10</sup>, Michael Roerecke<sup>1,2</sup>, Robin Room<sup>11,12</sup>, Andriy V. Samokhvalov<sup>1</sup> & Benjamin Taylor<sup>1,2</sup>

Centre for Addiction and Mental Health (CAMH), Toronto, Canada, Dalla Lana School of Public Health, University of Toronto, Toronto, Canada, Institute for Clinical Psychology and Psychotherapy, TU Dresden, Dresden, Germany, Division of Epidemiological and Psychosocial Research, National Institute of Psychiatry, Mexico City, Mexico, Department of Psychology, University of Western Ontario, London, Ontario, Canada, National Drug Research Institute, Curtin University of Technology, Perth, Western Australia, Alcohol and Drug Abuse Research Unit, Medical Research Council, Cape Town, South Africa, Department of Psychiatry, Stellenbosch University, Cape Town, South Africa, Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, Canada, Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland, School of Population Health, University of Melbourne, Australia and AER Centre for Alcohol Policy Research, Turning Point Alcohol and Drug Centre, Fitzroy, Victoria, Australia 2

- Relative risk for pneumonia – 1.3 at alcohol consumption of 60 g/day
- 3-8 fold increase in risk of pneumonia in alcohol dependence

#### Alcohol-attributable fractions for selected causes of death, 2012 (WHO, 2014)

#### All global deaths

<ul><li>Interpersonal violence</li></ul>	22
<ul><li>Self-harm</li></ul>	22
<ul><li>Tuberculosis</li></ul>	12
<ul><li>HIV/AIDS</li></ul>	1
<ul><li>Alcohol use disorders</li></ul>	100
<ul> <li>Fetal Alcohol Syndrome</li> </ul>	100

### Alcohol consumption: patterns of use and health risks

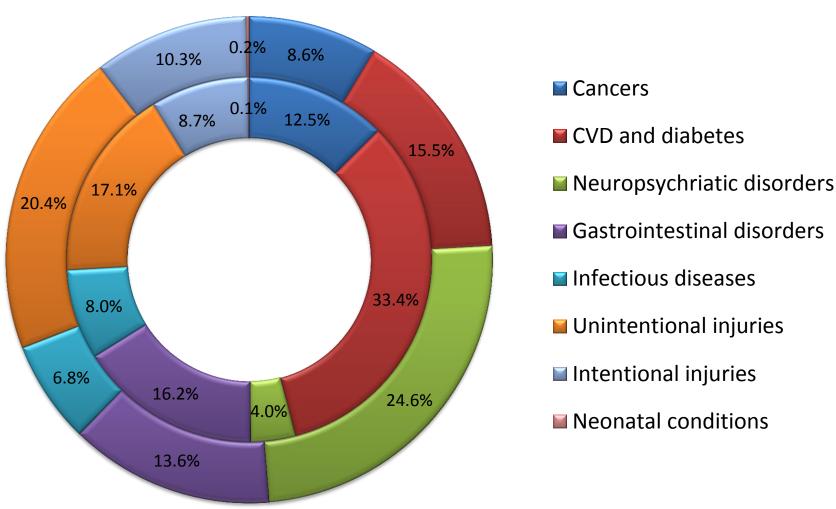
- Low-risk use of alcohol in healthy adult (18 or 20+ years old) individuals
- Hazardous alcohol consumption: with increased risk levels, but without obvious health consequences
  - Heavy episodic drinking (60 grams on one occasion monthly)
  - Heavy drinking (definitely more than 60 grams per day)
- Episodes of harmful alcohol consumption
  - Injuries, cardiac arrhythmias, alcohol-induced violence, severe intoxication, etc.
- Harmful pattern of alcohol consumption
- Alcohol dependence

### Several facts about global burden of disease attributable to alcohol in 2012 (WHO, 2014)

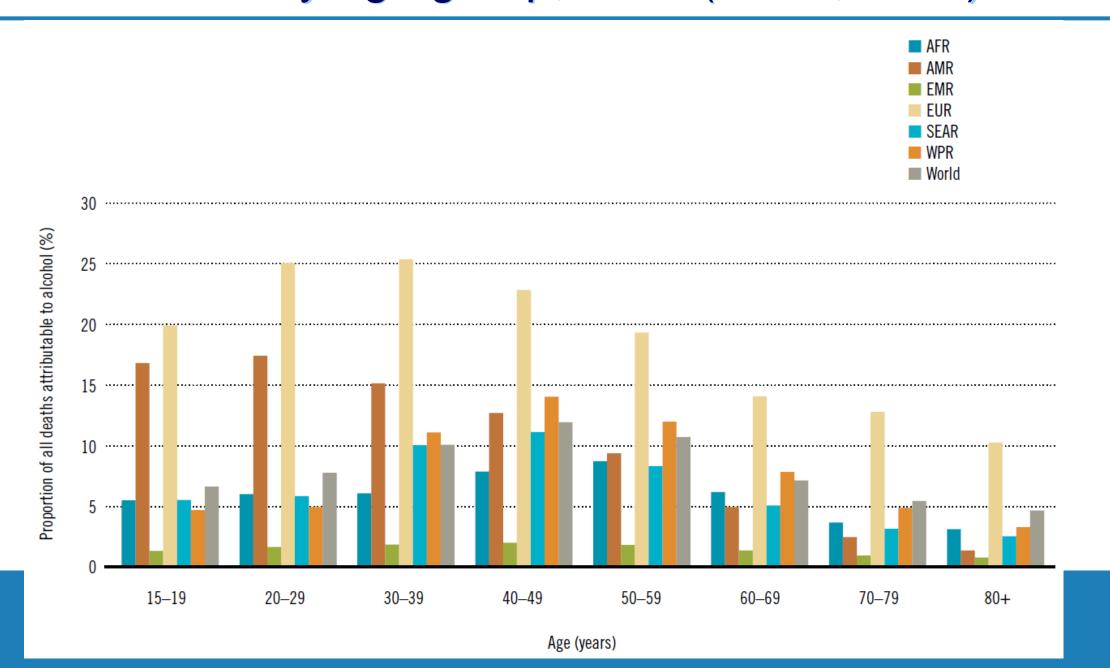
- 3.3 million deaths (5.9% of deaths in all age groups globally) are attributable to alcohol consumption
  - 7.6% for men
  - 4.0% for women
- 139 million DALYs lost or 5.1% of the global burden of disease expressed in DALYs are attributable to alcohol consumption.

### Distribution of alcohol attributable deaths and DALYs in 2012 (WHO, 2014)

Inner circle: Deaths Outer circle: DALYs



### Proportion of alcohol-attributable deaths (%) of total deaths by age group, 2012 (WHO, 2014)



#### Global burden of disease attributable to risk factors for the age group 15 to 49 years old

(Source: IHME, 2015)

	Glob	High	west pacific	ern Eur	alasia High	income Amer Centr	al Europe South	pe emen Easte	ca Euro	pe Asia Tropi	almen Centr	ca al Ameri Gov	ca cheast b	sia Mande Mande	ar America	Africa Anddle	bean South	ASIB OCEBÍ	ila South	ernare Easte	n Africa	Africa al ahara Sahara Sub	n Africa Saharan Afri
Alcohol use	1	1	1	2	1	1	1	1	3	1	1	3	2	1	10	2	3	5	1	1	1	1	
Dietary risks	2	2	4	5	4	2	2	2	1	2	3	1	1	2	1	1	2	3	3	4	4	4	
Occupational risks	3	4	6	4	8	6	4	10	2	3	4	4	6	4	3	10	1	6	7	2	3	3	
Smoking	4	5	3	6	5	3	6	3	4	7	8	2	4	9	5	7	4	4	6	10	12	13	
High blood pressure	5	8	7	9	9	5	7	4	5	6	7	5	3	7	4	4	7	7	4	5	5	5	
High body-mass index	6	6	5	3	3	4	5	5	9	4	2	7	5	5	2	3	13	2	2	11	14	8	
Drug use	7	3	2	1	2	7	3	6	10	5	6	9	9	3	8	8	11	11	8	7	10	9	
High fasting plasma glucose	8	9	9	8	6	9	9	9	8	8	5	8	7	10	7	6	8	1	5	9	8	7	
Household air pollution	9	20	20	20	20	12	16	15	7	13	13	6	11	12	15	11	6	9	12	6	6	6	
Iron deficiency	10	14	15	13	15	14	13	13	15	12	12	11	13	6	11	5	5	10	10	3	2	2	
Physical inactivity	11	7	8	7	7	8	8	8	11	9	9	10	8	11	6	9	12	8	11	14	13	12	
Ambient PM pollution	12	10	12	15	13	11	15	11	6	16	14	12	10	16	9	13	10	15	16	16	15	11	
Intimate partner violence	13	11	11	11	12	13	10	12	12	10	10	13	14	8	13	12	9	12	9	8	7	10	
High total cholesterol	14	12	10	12	10	10	11	7	13	11	11	14	12	14	12	14	15	13	15	18	18	18	
Childhood sexual abuse	15	13	13	10	11	15	12	14	14	14	15	16	16	13	16	15	14	17	13	13	16	15	
Lead	16	15	14	14	14	16	14	16	16	15	16	15	15	15	14	16	17	14	14	17	17	17	
Sanitation	17	17	18	17	19	20	18	19	18	18	17	17	18	17	18	17	16	16	17	12	9	14	
Unimproved water	18	18	19	18	18	19	19	20	20	19	19	18	20	18	17	18	18	18	18	15	11	16	
Radon	19	16	16	16	16	17	17	17	17	17	18	19	17	19	19	19	20	19	19	20	20	20	
Ozone	20	19	17	19	17	18	20	18	19	20	20	20	19	20	20	20	19	20	20	19	19	19	

**Source: IHME** 

#### Leading risk factors for DALYs, 1990, 2000, 2015

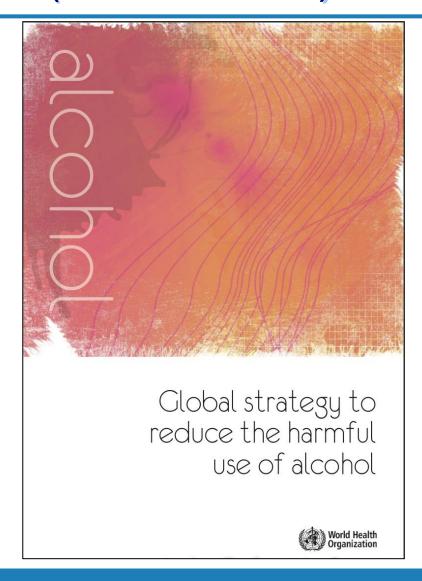
(GBD 2015 Risk Factors Collaborators, *Lancet*, 2016, 388: 1659-724)

Leading rbks 1990	Leading risks 2005	%-change number of DALYs 1990-2005	% change all-age DALY rate 1990-2005	% change age- standardised DALY rate 1990-2005		Leading risks 2015	% change number of DALYs 2005-15	K change all-age DALY rate 2005-15	% change age standardised DALY rate 2005-15
1 Childhood undernutation	1 High blood pressure	28-4%	4-4%	-11-0%		1 High blood pressure	11-7%	-1.2%	-13-6%
2 Ursafe water	2 Childhood undemutrition	-48-3%	-58-0%	-46-9%	·	2 Smoking	1-0%	-10-7%	-21-3%
3 High blood pressure	35moking	16-9%	-4-9%	-17.7%	miles and the same of the same	3 High fisting plants glucose	22-2%	8-1%	-4-5%
4 Household air pollution	4 High fasting plasmaglucose	48-1%	20-5%	47%		4 High body-mass index	22-0%	7-9%	-4-9%
5 Smoking	5 Unsufe sex	199-0%	143-2%	1557%	l. /*\	5 Childhood undernutrition	-38-5%	-45-6%	-42.7%
6Ambient particulate matter	6 Ambient particulate matter	-9-6%	-26-5%	-23-4%	1	6 Ambient particulate matter	-4-2%	-15-3%	-21-3%
7 Unsafe sanitation	7 Household air pollution	-21-4%	-36-1%	-31-1%	1-X., /	7 High total cholesterol	8-6%	-6-0%	-16-4%
8 Suboptimal breakfeeding	8 High body-mass index	547%	25-8%	8-4%	Y マブ	8 Howehold air pollution	-20-3%	-29-5%	-33-1%
9 Handweshing	9 Urnafe water	-35-3%	-0.38	-37-8%	k 🗩	9 Alcohol use	-1-2%	-12-6%	-17-9%
10 High feeting plasma glucose	10Alcohol use	28-6%	4-6%	-47%		10 High sodium	7-2%	-5/2%	-17-0%
11 Akoholuse	11 High total cholesterol	24-9%	1.6%	-13-8%	بز مر	11 Low whole grains	7-1%	-5-3%	-16-1%
12 High total cholesterol	12 High sodium	27-2%	34%	-10-5%		12 Ursafe sex	-29-5%	-37-6%	-37-6%
13 High body-mass inch	1] Low whole grains	33-1%	8-2%	-6-4%		13 law fruit	5-5%	-6-7%	-17-4%
14 High sodium	14 Lowfruit	31.7%	7-1%	-7-2%		14 Uniofe water	-26-2%	-34-7%	-327%
15 Lowwhole grains	15 Unsafe sanitation	-38-1%	-49-7%	-407%	k /	15 Low glomerular filtration	15-5%	2.2%	-8-6%
16 Low fruit	16 Handwashing	-36-3%	-48-2%	-38-1%		16 Iron deficiency	-4-1%	-15.2%	-12-0%
17 Iron deficiency	1/ Iron deficiency	12-6%	-8-4%	-2-8%	X.	1/ Low nuts and seeds	13-0%	0	-11-8%
18 Second-hand smoke	18 Suboptimal breakfeeding	-50-0%	-59-3%	-48-5%	<b>I</b> ///:	18 Handwashing	-26-3%	-34-8%	-32-9%
19Vitamin A deficiency	19 Low glomerular filtration	31.7%	7-1%	-4-8%	r× `	19 Urnative sanitation	-31-9%	-39-8%	-37-9%
20 Umade sex	20 Low ruts and seeds	33-4%	8-5%	-7-0%	r See	20 Lowvegetables	4-7%	-7-4%	-18-3%
21 Low glomerular filtration	21 Low vegetables	27-7%	3-8%	-10-6%	- 'S-	21 law physical activity	17-4%	3.9%	-9-6%
22 Low vegetables	22 Second-hand smoke	-36-1%	-48-0%	-39-2%	]	22 Suboptimal breastfeeding	-33-7%	-41-4%	-17-8%
23 Low nuts and seeds	23 Low physical activity	32-0%	7-4%	-8-3%		23 Lowomega-3	10-4%	-2-3%	-13-8%
24 Lowphysical activity	24 Low orrege-3	29-3%	5-1%	-9-6%		24 Druguse	15-8%	2-4%	-1-0%
25 Low omega-3	25 Drug use	75-3%	42-6%	33-9%		25 Second-hand smoke	-15-9%	-25-6%	-28-1%
26 Zinc deficiency	26 Vitamin A deficiency	-57-4%	-65-3%	-563%	<u> </u>	26 Occupational ergonomic	10-6%	-2-2%	-7-4%
2/ Drug use	3/ Occupational ergonomic	23-3%	0-3%	-8-8%	-	27 High processed meat	13-9%	0.8%	-11-1%
28 Occupational ergonomic	28 Intimate partner violence	76-1%	43-2%	32-5%	$\rightarrow$	28 Intimate partner violence	-10-5%	-20-9%	-23-2%
29 High processed meat	29 High processed meat	32-9%	8-1%	-7-5%		29 Occupational injury	10-5%	-2-3%	-3/1%
30 Occupational injury	30 Occupational injury	27-1%	34%	-1-6%		30 High trans fat	14-4%	1.2%	-9-8%
31 Intimate partner/violence 33 High trans fat	31 High trans fat 36 Zinc deficiency					39 VitaminA deficiency 40 Zinc deficiency		Environn Behaviou Metabol	ural

Main international policy frameworks and effective strategies and interventions to reduce the harmful use of alcohol

### Global strategy to reduce the harmful use of alcohol (WHO, 2010)

The concept of the harmful use of alcohol is broad and encompasses the drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.



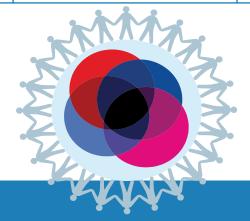
## Recommended ten target areas for policy measures and interventions (WHO, 2010)

- 1. Leadership, awareness and commitment
- 2. Health services' response
- 3. Community action
- 4. Drink-driving policies and countermeasures
- 5. Availability of alcohol
- 6. Marketing of alcoholic beverages

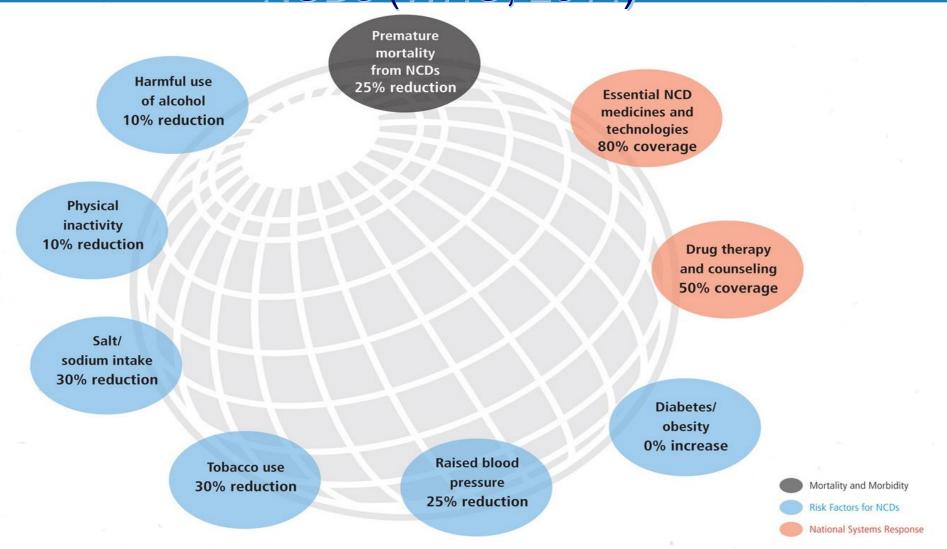
- 7. Pricing policies
- 8. Reducing the negative consequences of drinking and alcohol intoxication
- Reducing the public health impact of illicit alcohol and informally produced alcohol
- 10. Monitoring and surveillance

## The UN Political Declaration on the Prevention and Control of Non-communicable Diseases: focus on 4 groups of conditions and 4 modifiable risk factors of NCDs (2011)

	Tobacco use	Unhealthy diets	Physical inactivity	Harmful use of alcohol
Cardiovascular diseases	<b>√</b>	<b>✓</b>	<b>✓</b>	✓
Diabetes	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓
Cancer	✓	✓	✓	✓
Chronic lung disease	✓			



Harmful use of alcohol: one of 9 targets in the Global Monitoring Framework for prevention and control of NCDs (WHO, 2014)



#### SUSTAINABLE GEALS

















Ensure healthy lives and promote well-being for all at all ages

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drugs and harmful use of alcohol

3.3 Ending the AIDS epidemic and combating hepatitis,

3.4 Prevention and treatment of noncommunicable diseases and promotion of mental health

3.8 Universal health coverage

3.b Access to essential medicines. hol







SDG 2015: 17 goals (1 health), 169 targets (13 health) adopted at the United Nations Sustainable Development Summit 2015 25 – 27 September 2015

- 3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
- 3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol

Ensure healthy lives and promote well-being for all at all ages

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

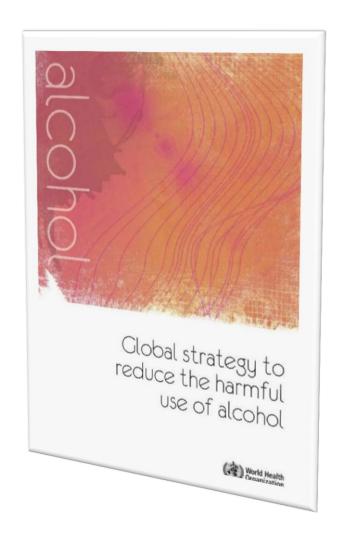
## Labelling in the WHO Global strategy to reduce the harmful use of alcohol

Can contribute to one of its five objectives:

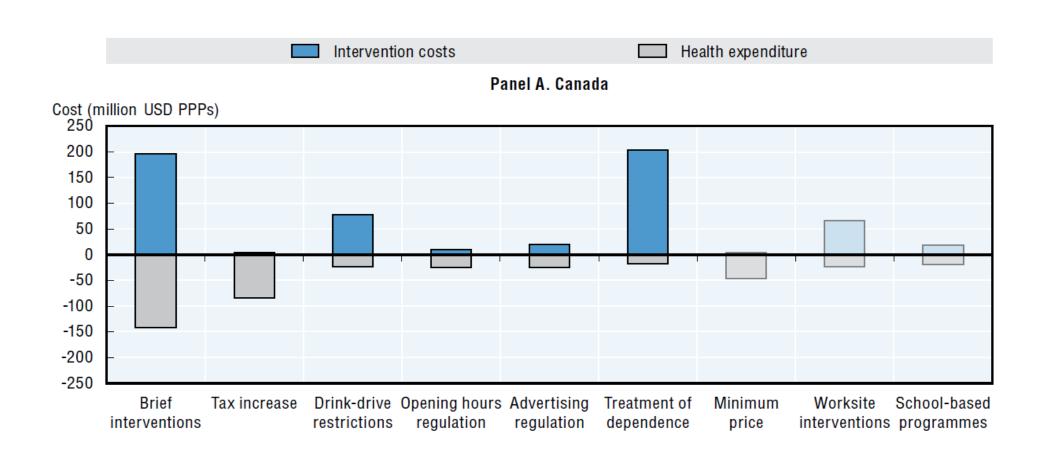
(a) raised global awareness of the magnitude and nature of the health, social and economic problems caused by harmful use of alcohol,...

An intervention listed under the area "Reducing the negative consequences of drinking and alcohol intoxication"

(f) providing consumer information about, and labelling alcoholic beverages to indicate, the harm related to alcohol.



## Economic impact at the population level from different policy options, average per year, 2010-50



#### Update of the list of effective measures (Appendix 3) on alcohol for

#### the Global NCD Action Plan (endorsed by WHA70 in 2017)

- Increase excise taxes on alcoholic beverages
- Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
- Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced density of retail outlets and reduced hours of sale)
- Enact and enforce drink-driving laws and blood alcohol concentration limits via sobriety checkpoints
- Provide brief psychosocial intervention for persons with hazardous and harmful alcohol use

- Carry out regular reviews of prices in relation to level of inflation and income
- Establish minimum prices for alcohol where applicable
- Enact and enforce an appropriate minimum age for purchase or consumption of alcoholic beverages
- Restrict or ban promotions of alcoholic beverages in connection with sponsorships and activities targeting young people
- Provide prevention, treatment and care for alcohol use disorders and comorbid conditions in health and social services
- Provide consumer information about, and label, alcoholic beverages to indicate, the harm related to alcohol.

# Role of alcoholic beverage labelling in reducing the harmful use of alcohol: main issues and current practices

## Why alcohol labelling is important for consumers of alcoholic beverages and those who buy or serve them

- Alcoholic beverages are not neutral to health of consumers due to inherent properties of ethanol/alcohol, though the risks of health consequences depend on the level, patterns, contexts of drinking, individual characteristics and social determinants of health
  - Can lead to intoxication that is critical for risks of injures, violence and risk behaviors
  - Can lead to liver disease and around 200 other diseases and health conditions due to its
    effects on tissues and organs (toxicity and carcinogeneity)
  - In high doses can lead to alcohol poisoning and death, particularly in "under-age" and "alcohol-naive" individuals, and those who take medications with potential of respiratory depression
  - Can lead to Fetal Alcohol Syndrome when used during pregnancy (teratogenicity)
  - Can lead to alcohol dependence and individual risk is difficult to assess and predict
  - There is clear dose-response relationship with health consequences
- Some alcoholic beverages contain substances that can lead to allergy-like symptoms, including sulphites, egg and egg-like products, and milk and milk-based products
- Alcoholic beverages have caloric value

## Alcoholic beverages are energy dense products

- In human body metabolism of 1 gram of ethanol produces 7.1 calories which is less only for fats (9.0) and almost 2 times higher than for proteins or carbohydrates (4.0)
- A small bottle of beer of normal strength (5%) contains around 140 calories, a glass of wine (175 ml) 160, and a serving of spirits (40 ml at 40% ABV) 95, but can be doubled if consumed with a mixer
- Alcohol has been found to account for approximately 10% of adult drinkers' total energy intake in the UK and 16% in the US (Lukasiewicz et al, 2005), and four out of 10 unaware of energy value of alcoholic beverages (Drinkaware, 2017).

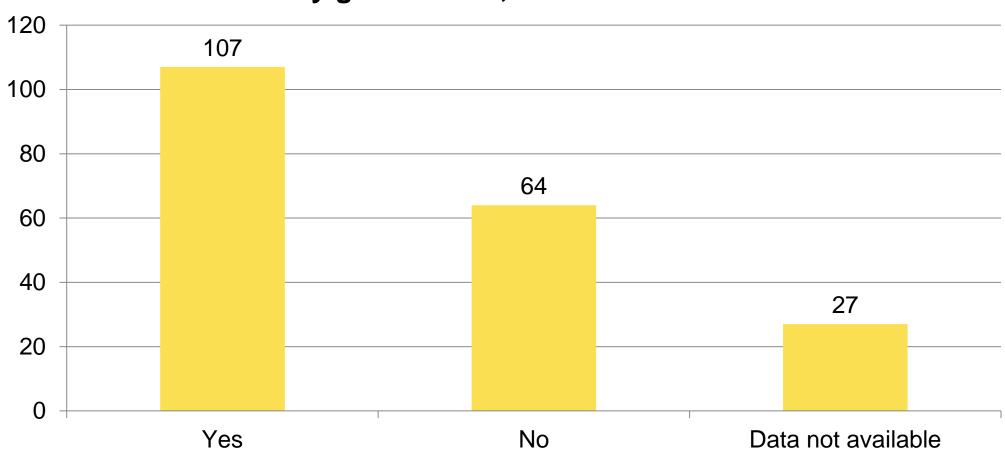
## Why alcohol content labelling is important for health system responses

- Public health messages on alcohol and health depend on the extent of knowledge of consumers about alcoholic beverages, and labelling has unique potential to provide accurate and reliable information to consumers at the points of sales and consumption
- All information about dose-response relationship of alcohol consumption and major health conditions is available for particular thresholds of alcohol consumption (e.g. 20 grams per day or less, 20-40 grams per day), which is the basis of national drinking guidelines where they exist
- Compliance with "drinking guidelines" depend on understanding of product information by consumers, and particularly on the amount of alcohol consumed
- Screening and brief interventions for hazardous and harmful drinking is one of the most effective and cost-effective strategies in health systems to reduce the harmful use of alcohol, and screening depends on the assessment of alcohol consumed in "standard drinks" or grams of pure alcohol, and intensity of intervention depends on extent of knowledge of a patient about alcohol and its health effects.

#### Definition of an alcoholic beverage

(Preliminary findings from the 2016 WHO Global Survey on Alcohol and Health)

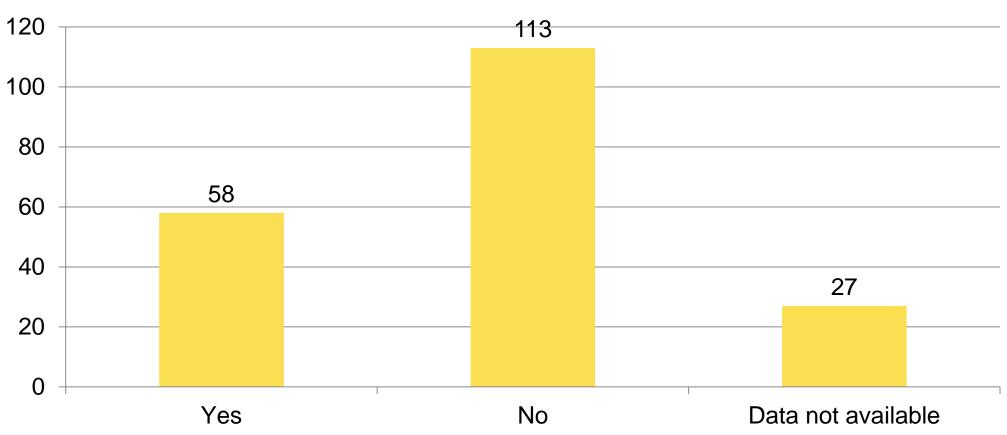
#### Standard legal definition of an alcoholic beverage that is used by government, number of countries



#### Definition of a standard drink

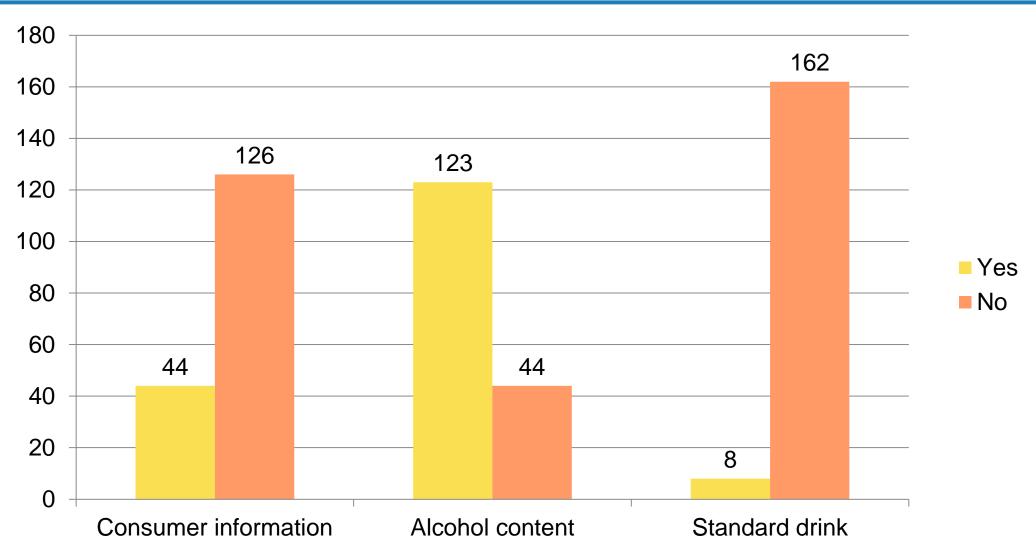
(Preliminary findings from the 2016 WHO Global Survey on alcohol and health)

#### Is there a definition of a standard drink at the national level? Number of countries



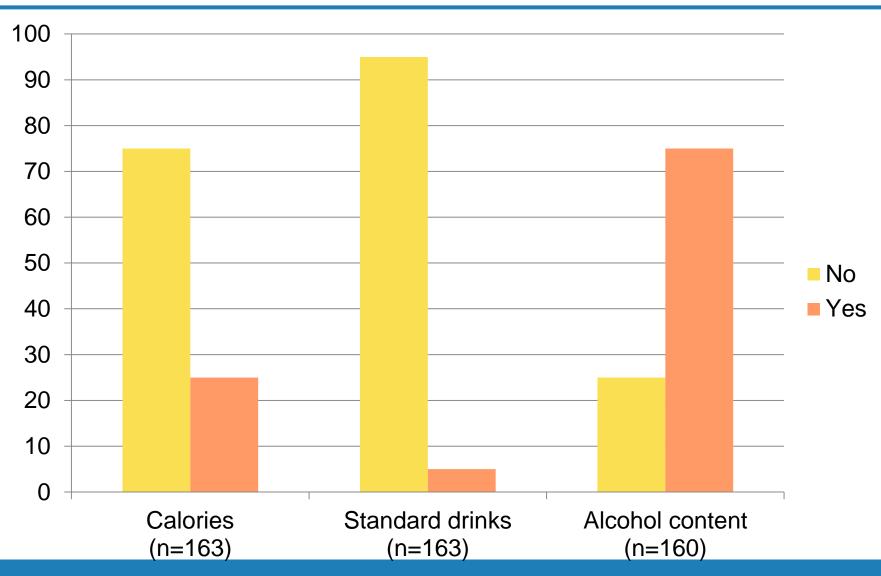
## National legal requirement for labelling on beer containers

(Preliminary findings from the 2016 WHO Global Survey on alcohol and health)



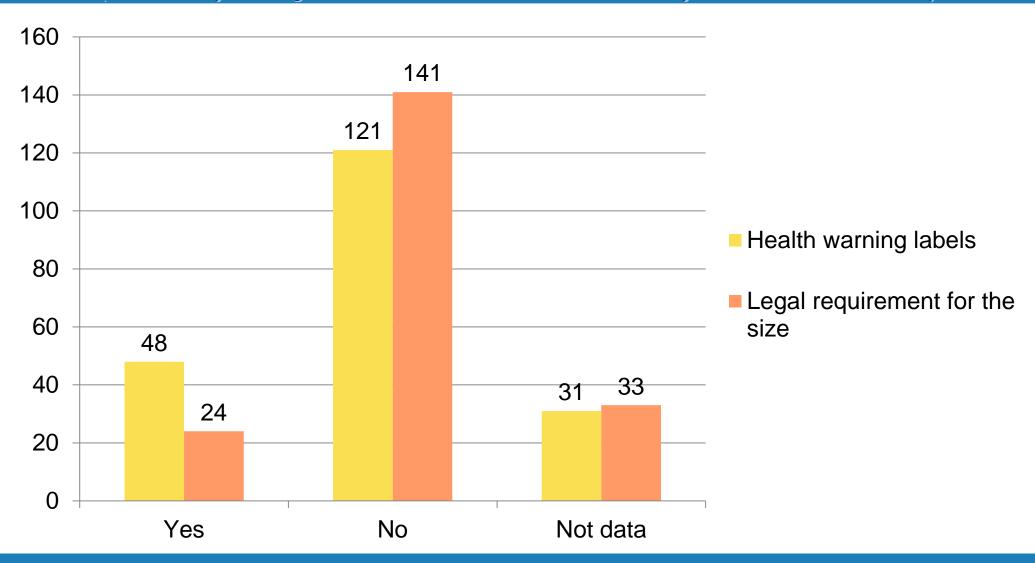
#### Consumer information (%) on the labels of alcohol containers (national legal requirements)

Preliminary results of the WHO Global Survey on Alcohol and Health



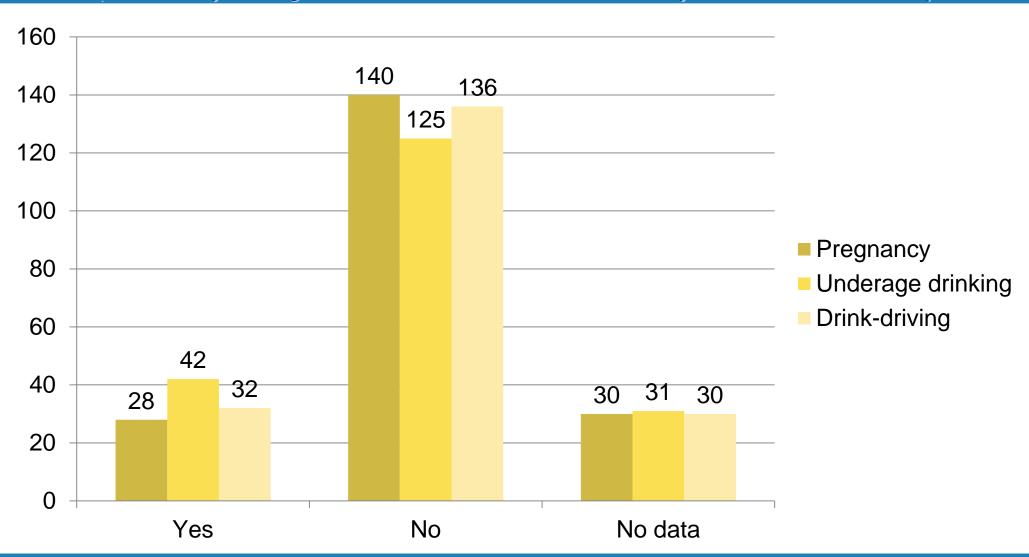
## National legal requirement for health warning labels

(Preliminary findings from the 2016 WHO Global Survey on alcohol and health)



## National legal requirement for health warning labels

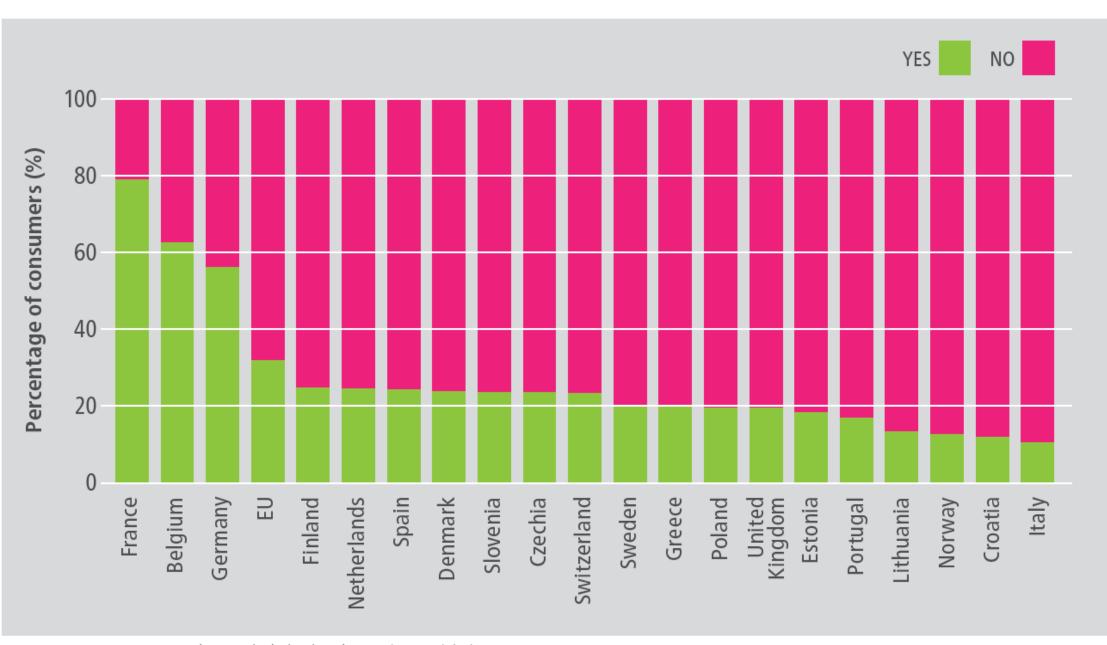
(Preliminary findings from the 2016 WHO Global Survey on alcohol and health)



#### **European Union**

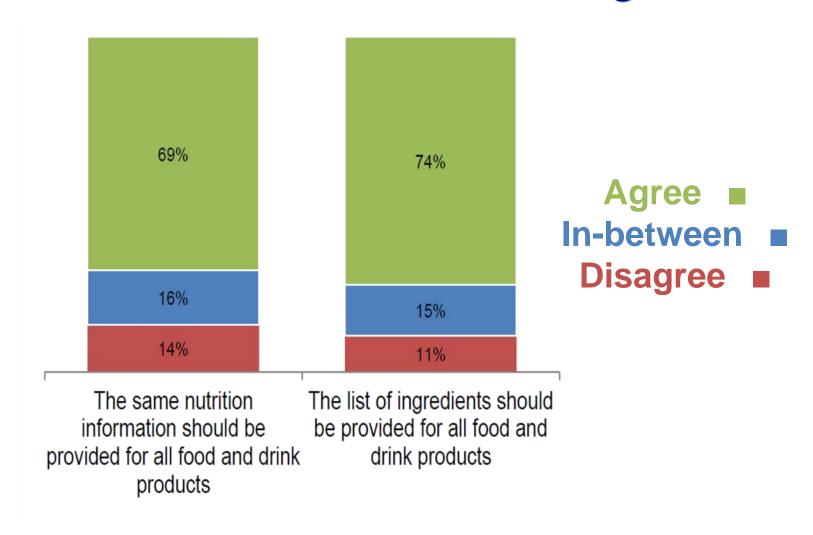
- Alcoholic beverages are prohibited from bearing health claims; the only nutritional claims that are permitted are ones referring to low alcohol levels and reduction of alcohol or energy content. (EC1924/2006)
- The EU Regulation on the provision of food information to consumers (1169/2011) which became applicable in December 2014 includes rules on listing ingredients and providing a nutrition declaration. These rules are mandatory for all foods, including alcoholic beverages. There is an exemption, however, for beverages containing more than 1.2% alcohol per volume.
- The industry should propose within a year (March 2018), a harmonised approach aiming to provide consumers with information about the ingredients present in alcoholic beverages and the nutritional value of alcoholic beverages. COM(2017) 58

Fig. 1. Perceptions among consumers in 20 European countries of whether alcoholic beverage labels provide sufficient health-related information



Source: EU Joint Action on Reducing Alcohol Related Harm (RARHA) (19)

## Consumer support for Nutritional labelling on alcoholic beverages



# Proposed new work for consideration of CCFL

#### Existing alcohol-related work of CODEX

- Codex has developed standards for additives (CODEX STAN 192-1995) and codes of practice to reduce contaminants in alcoholic beverages (CAC/RCP 63-2007).
- Codex has also set labeling provisions for all prepackaged foods (CODEX STAN 1-1985), as well as guidance on nutrition and health claims (CAC/GL 23-1997) which also apply to alcoholic beverages though they are not explicitly mentioned.
- Codex has never set a commodity standard for an alcoholic beverage.

#### Potential interfaces with CODEX

- Definition and standards of alcoholic beverages
- Definition of a standard drink
- Product information
  - Alcoholic strength/content
  - Number of standard drinks
  - Calories value
  - Ingredients
- Health warnings
  - Allergens
  - Toxicity
  - Carcinogenicity
  - Teratogenicity
  - Intoxicating effects
  - Dependence potential
  - Age limits
- Restrictions on the marketing information, nutrition claims and packaging presenting risks to health.

## Discussion Paper on alcoholic beverage labelling prepared by WHO

- Highlights the need to inform consumers about the health risks associated with alcoholic beverages, their ingredients, allergens, alcohol strength and energy value
- Argues that it may be timely for Codex to initiate the process of developing guidance on alcoholic beverage labelling and suggests several issues that can be addressed with objectives:
  - Public health protection, particularly protecting health of populations at high risk of alcohol-related harm
  - Potential removal of barriers to trade by introducing a common set of standards
- Emphasize that appropriate alcohol beverage labelling could be considered as a component of a comprehensive strategy to reduce the harmful use of alcohol.

## Alcoholic beverages - no ordinary food commodities

- Alcoholic beverages should not be considered as ordinary food commodities in view of their specific psychoactive, toxic and dependence- producing properties which determine considerable negative effect on health of populations.
- "No-ordinary" nature of alcoholic beverages can not justify the current status of being exempted from international regulations and standards for food commodities, but, on the contrary, require special efforts to inform consumers at the points of sale and consumption about the products and the health risks associated with their consumption.

#### Main conclusions

- Reduction of harmful use of alcohol is one of global public health priorities in view of significant alcohol-attributable health and social burden
- Alcohol product labelling could be considered as a component of a comprehensive public health strategy to reduce alcohol-related harm
- Alcoholic beverage labelling is one of policy options included in the major international policy frameworks on alcohol and prevention and control of NCDs, which contribute to achievement of SDG 2030 health targets
- For consumers, the alcoholic beverage labels is the principal source of information at the point of sale, and a number of consumer organizations and public health organizations (such as WHO) have long been calling for consideration of mandatory content and nutritional labelling and health messages
- It may be timely for CODEX to initiate the work on alcoholic beverage labelling.

#### Thank you for your attention

Further information at:

http://www.who.int/substance\_abuse/

http://www.who.int