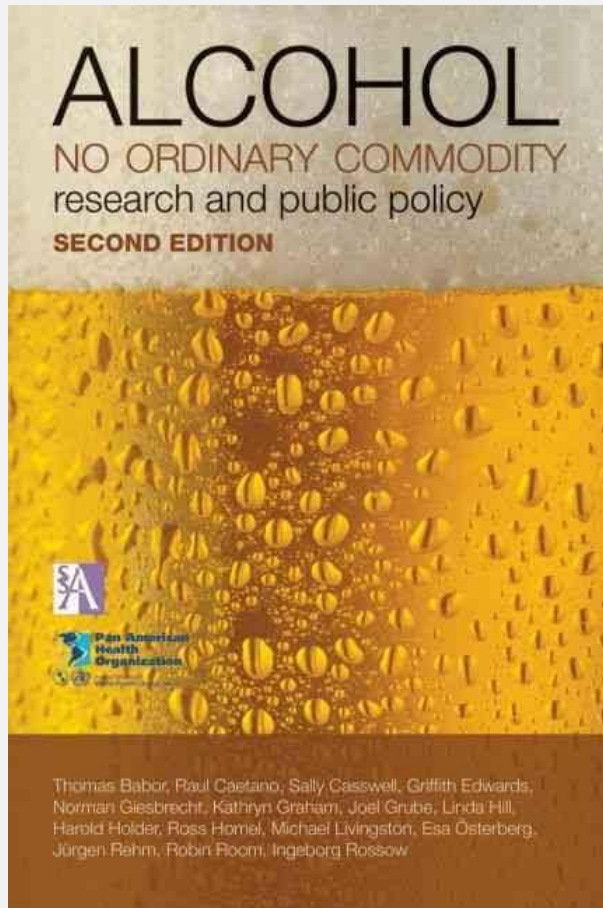# Alcohol control – what works?
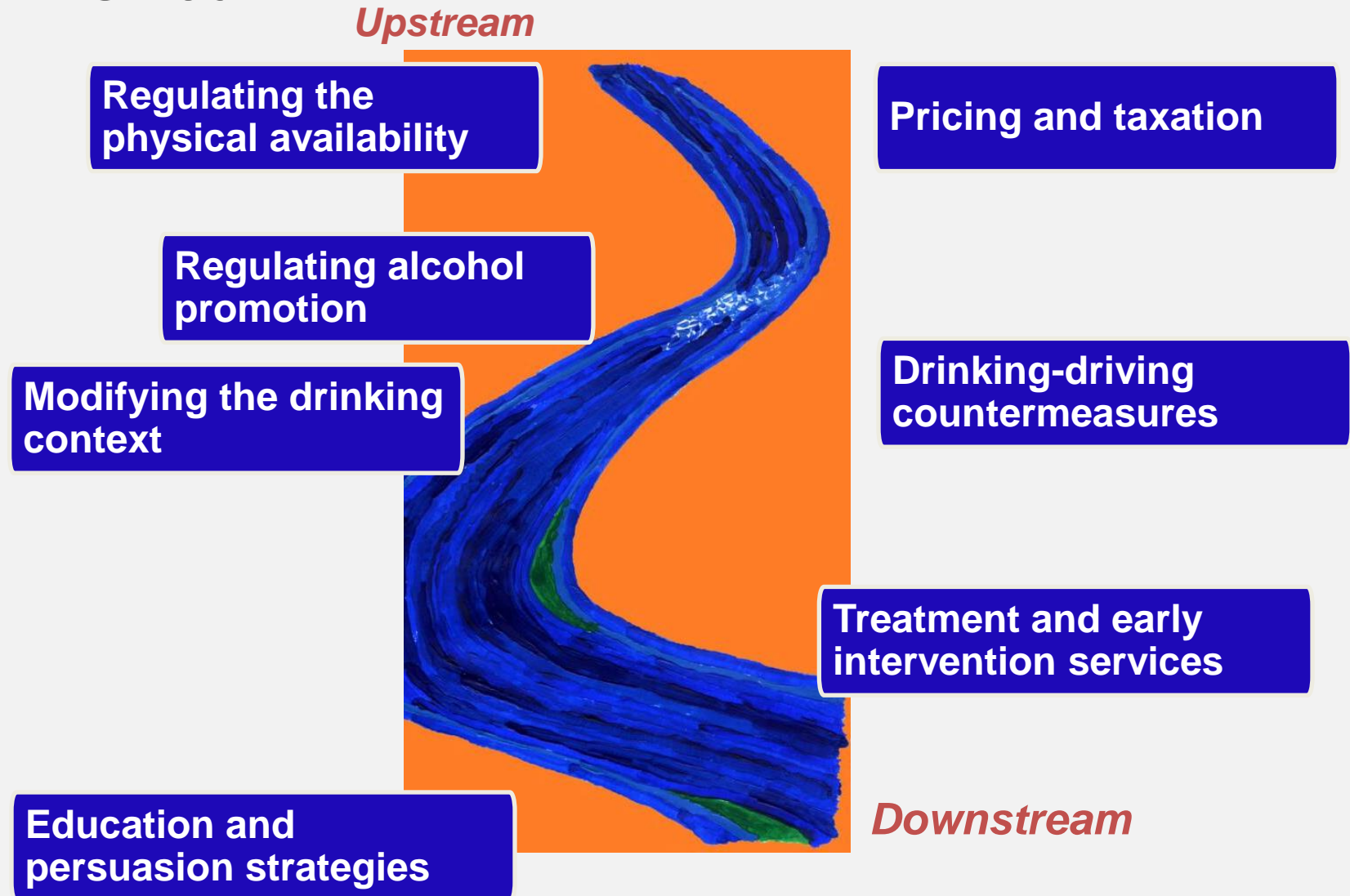
The evidence base…

Alcohol: No ordinary commodity

- The benefits connected with the production, sale, and use of this commodity come at an enormous cost to society.

- Three important mechanisms explain alcohol's ability to cause medical, psychological, and social harm:
    1. physical toxicity
    2. Intoxication
    3. dependence

- Public health responses must be matched to this complex vision of the dangers of alcohol as they seek better ways to respond to population-level harms.

Seven policy areas for intervention

1. Alcohol taxes and other price controls*
2. Regulate physical availability through restrictions on time, place, and density of alcohol outlets*
3. Regulate alcohol advertising and other marketing*
4. Alter the drinking context
5. Drink-driving countermeasures (not relevant to cancer control except as they may reduce overall consumption)
6. Conduct screening and brief intervention in health care settings; increase availability of treatment programmes
7. Education and persuasion: provide information to adults and young people especially through mass media, workplace and school-based alcohol education programmes

* WHO 'best buys', endorsed by OECD

Strategies and interventions to reduce alcohol-related harm upstream and downstream

Upstream

Regulating the physical availability

Pricing and taxation

Regulating alcohol promotion

Modifying the drinking context

Drinking-driving countermeasures

Treatment and early intervention services

Education and persuasion strategies

Downstream

There is no silver bullet…

A comprehensive framework of policies is needed to effectively tackle alcohol harm

Global Best Practice

- There should be a national policy on alcohol
- Alcohol is not an ordinary commodity, and requires a comprehensive regulatory system
- No single measure will suffice – the regulatory system should reflect best practices across federal and sub-federal governments

Target areas
Global Strategy to Reduce the Harmful Use of Alcohol

Leadership, awareness and commitment

1a[1] - Written national policy on alcohol

Yes	Some measures	No	No data available
5	6	22	2

1b/4 [2] - NCD operational multisectoral national plan NCD/RF (alcohol)

Yes	Some measures	No	No data available
20	5	9	1

1c [2] - National multisectoral commission, agency or mechanism to oversee NCDs/RF (alcohol)

Yes	No	No data available
11	21	3

Legend: ■ Yes ■ Some measures ■ No ■ No data available

Source: Global Survey on Alcohol and Health (GSHA), 2016[1]. (unpublished)
NCD Country Capacity Survey, 2017 [2]

1. Price

- Theoretical assumption: Increasing the economic cost of alcohol relative to alternative commodities will reduce demand

- Pricing policies include:
  - Increased taxes
  - Minimum pricing
  - Bans on 'below cost' sales and "happy hour" drink discounts
  - Low alcohol tax incentives/special taxes on certain products, e.g., alcopops

Sugar, **rum**, and **tobacco,** are commodities which are no where necessaries of life, which are become objects of almost universal consumption, and which are therefore **extremely proper subjects of taxation.**

Adam Smith

An Inquiry into the Nature and Causes of The Wealth of Nations, 1776

Evidence to support pricing policies

- Pricing policies based on sound economic theory – when the price of a product goes up, demand decreases
- Studies from around the world show that increased taxation on alcohol results in reduced rates of consumption, alcohol-related deaths, crime, violent assaults, traffic accidents.
- Minimum pricing in Canada has reduced alcohol harm: In British Colombia, 10% average price increase = 9% reduction in alcohol related crime, 9% reduction in hospitalizations
- Young people and heavy drinkers are particularly price sensitive
- Taxes on alcopops reduce consumption amongst young people
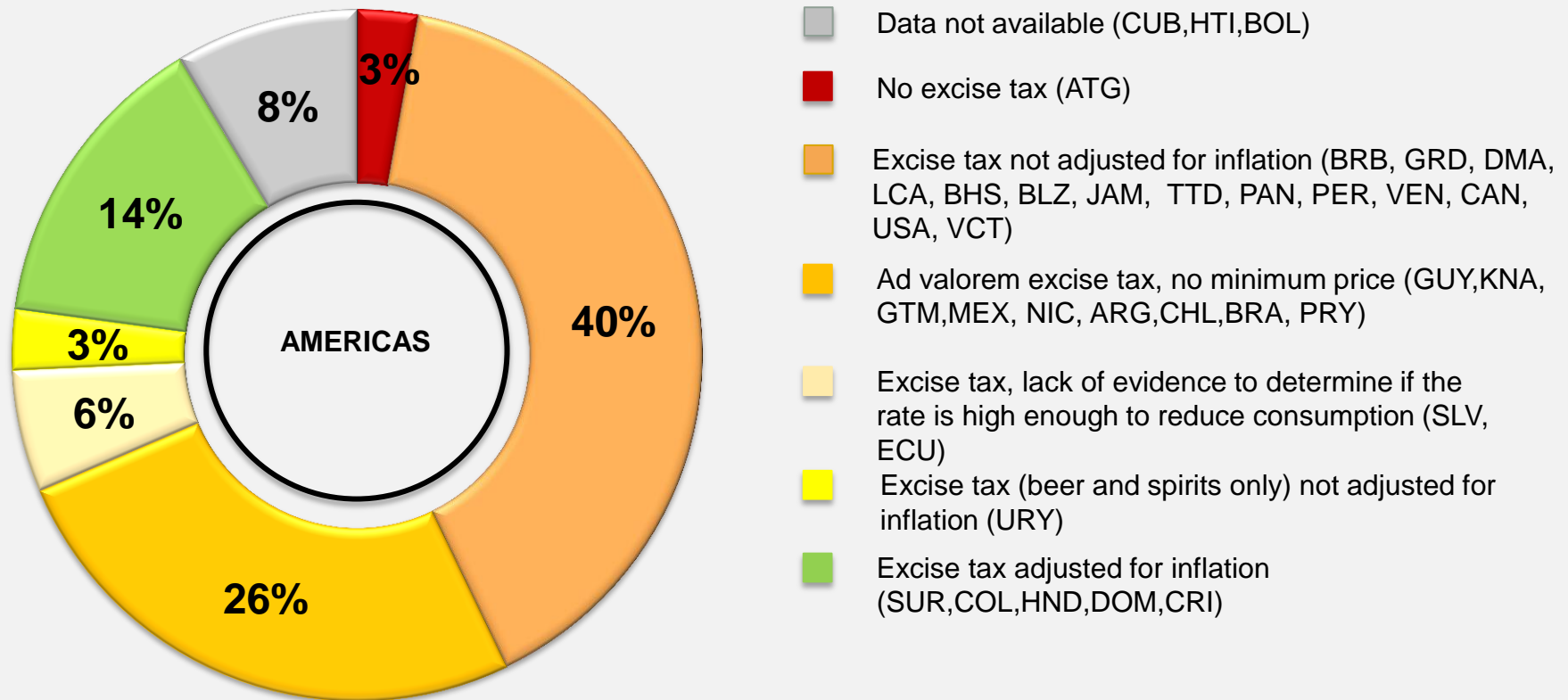- Lower taxes on low alcohol products lead to product switching

Health effects of alcohol taxes: specific studies

- Reduce:
  - Liver cirrhosis
  - Delirium tremens
  - Male suicide
  - Criminality
  - Hospitalizations
  - Alcohol-related disease mortality
  - Workplace injuries
  - STDs
  - IPV
  - Rape
  - Robbery
  - Severe violence towards children
- No impact on possible health benefits among moderate drinkers

Public health goals: alcohol taxation

- Equalize based on alcohol content
- Index for inflation
- Set minimum price

Taxation in the Americas region

AMERICAS

- 3%
- 8%
- 14%
- 3%
- 6%
- 26%
- 40%

Legend:

- Data not available (CUB,HTI,BOL)
- No excise tax (ATG)
- Excise tax not adjusted for inflation (BRB, GRD, DMA, LCA, BHS, BLZ, JAM, TTD, PAN, PER, VEN, CAN, USA, VCT)
- Ad valorem excise tax, no minimum price (GUY,KNA, GTM,MEX, NIC, ARG,CHL,BRA, PRY)
- Excise tax, lack of evidence to determine if the rate is high enough to reduce consumption (SLV, ECU)
- Excise tax (beer and spirits only) not adjusted for inflation (URY)
- Excise tax adjusted for inflation (SUR,COL,HND,DOM,CRI)

Source: Global Survey on Alcohol and Health 2016 (unpublished).

2. Restrictions on availability

- Theoretical assumption: Reducing supply by restricting physical availability will increase effort to obtain alcohol, and thereby reduce total volume consumed as well as alcohol-related problems.

- Policies to control availability include:
  - Limitations on hours and days of sale
  - Limitations on number, location and density of places of sale
  - Minimum purchase age restrictions
  - Public drinking bans

Global Strategy Recommendations

1. A licensing system on retail sales, or public health oriented government monopolies on the production and/or sale of alcohol;

2. regulating the number and location of on-premise and off-premise alcohol outlets, expressed as efforts to reduce alcohol outlet density;

3. regulating days and hours of retail sales;

4. establishing an appropriate minimum age for purchase or consumption of alcoholic beverages;

5. setting policies regarding drinking in public places.

Limiting number of retail outlets: State monopolies

- State Monopolies seen as effective policy:
  - Limit outlet numbers and density, regulate hours and days of sale, no profit incentive to offer price promotions
  - Countries that have dismantled state monopolies have had sharp rise in alcohol harm
- Finland, 1969 – relaxed state monopoly regulations to allow beer up to 4.7% to be sold in grocery stores:
  - After one year, overall alcohol consumption increased 46%
  - After five years, liver cirrhosis mortality increased 50%; hospital admissions for alcohol psychoses increased 110% in men, 130% in women
  - After five years, arrests for drunkenness increased 80% men, 160% women
- But, state monopolies politically unfeasible in many countries?

Limitations on days and hours of sale

- International evidence shows increased hours and days of sale = increased alcohol consumption and associated harms:
    - Australia
    - Brazil
    - Canada
    - Nordic countries
    - USA

- UK: introduction of 24-hr alcohol availability under Licensing Act 2003:
    - Increased levels of crime and anti-social behaviour between 3am-6am
    - Increased police expenditure and resource allocation during early hours
    - St Thomas' A&E Department, London – sharp increase in overnight alcohol-related admissions

Days of sale and trading hours

- Hours of sale in on- and off-license
  - Admissions to emergency rooms for intoxication, assaults, high BAC levels in drinking drivers
  - Multiple studies reviewed – a change of at least two hours in any direction will have measurable effects (CDC)

Closing hours

- Consider earlier night-time closing times
- Keep closing hours in line with transportation options; consider other environmental/setting factors which interact with closing hours
- Keep alcohol in a separate area of general grocery stores so that closing hours can be enforced

Closing time: Effects on homicides in Diadema, Brazil (1995-2005)
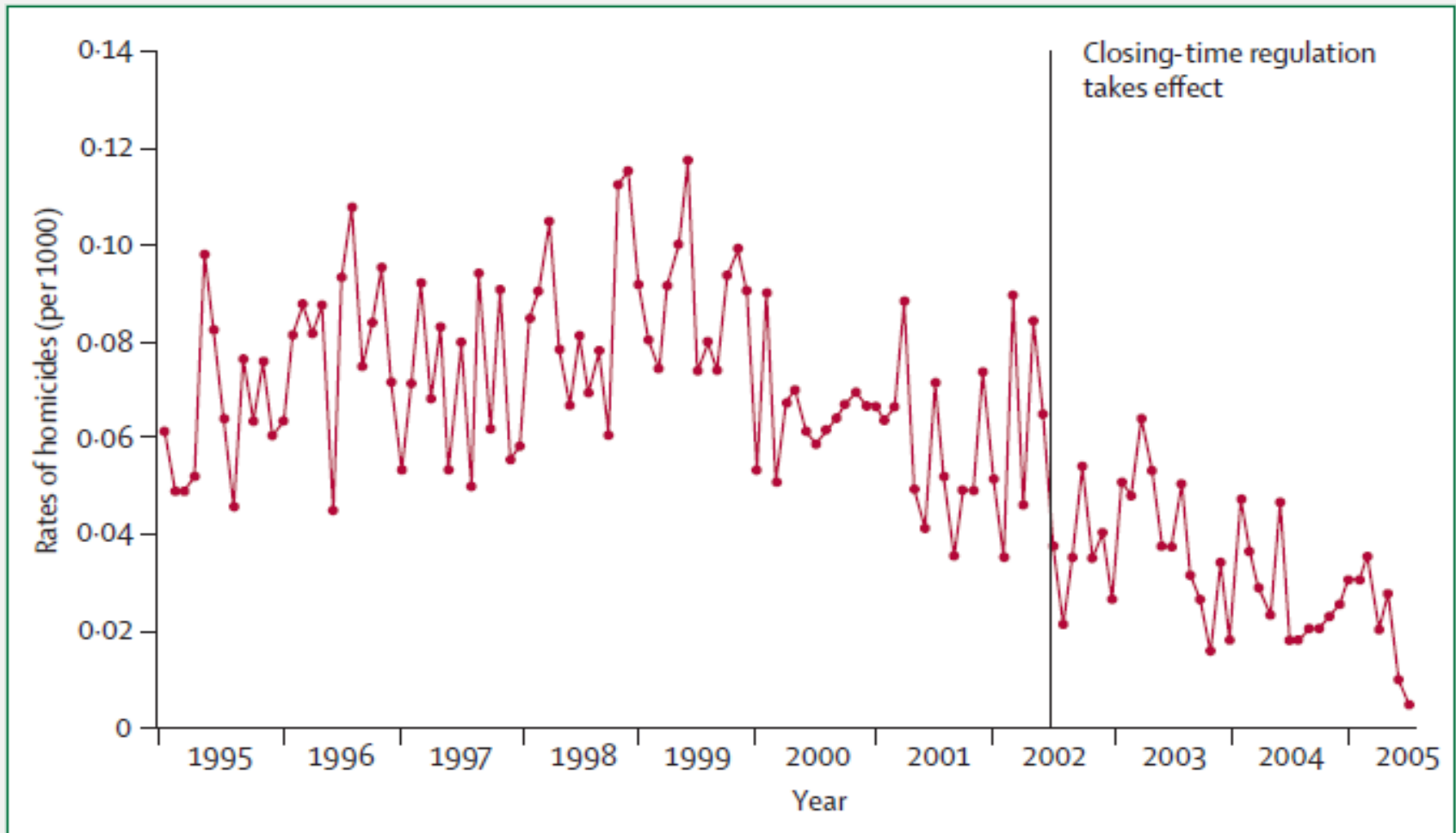
When the # of alcohol outlets increases...

So do the problems:

- violence/crime[1]

- sexually transmitted infections[2]

- noise[3]

- injuries[4]

- property damage[5]
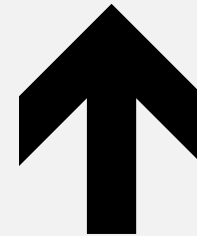
Sources: 1. Speer et al. 1998; 2. Scribner et al. 1998; 3. Livingston et al. 2007; 4. Holder et al. 2000; 5. Donnelly et al. 2006.

Limiting number of retail outlets

- Number and density of outlets associated with increased levels of alcohol-related violence and crime

- Density of outlets impacts young people – bringing together large numbers of potential victims and aggressors

- Number/density of outlets not always an indicator of availability – if large supermarket is licensed, alcohol may become more available even though number of small licensed shops may fall

Minimum Legal Purchase Age (MLPA)

- USA 1984 National Minimum Purchase Age Act: encouraged states to adopt the age 21 purchase standard
    - The number of young people who died in a crash when an intoxicated young driver was involved declined by almost 63%
    - Studies from US show increasing purchase age = decrease numbers alcohol-related road traffic accidents and fatalities (19% net decrease amongst young drivers)
    - Some evidence to suggest reduced rates of suicide and vandalism
    - Enforcement is key to success – compliance checks and mystery shopper tests
    - Relevance to cancer prevention: reduces long-term exposure

Minimum Legal Purchase Age (MLPA)

- Juarez and Chihuahua State, Mexico:
  - NGO-led "mystery shoppers" programme of compliance checks finds violation in >80% of outlets
  - Leads to voluntary actions by industry (decrease in advertising, training of sellers/servers) and…
  - Package of reforms likely to be passed by Chihuahua State:
    - Mandatory responsible beverage service training
    - Mandatory ID checking
    - Mandatory quarterly compliance checks by government officials
    - Alcohol advertising in outlets restricted to 30% of exterior signage and 30% of interior signage

Minimum age: recommendations

- The minimum legal age for purchase should be at least 18 years. Other age limits – on public or private drinking, and on being in a drinking place, should be considered in the light of the cultural circumstances in the society.

- The legal age should be strictly enforced; in the first place this responsibility should fall on sellers.

- Parents should be educated about the risks of drinking at a young age.

Public drinking bans

- Dramatic declines in arrests, assaults and ejections from a University football stadium following a ban on alcohol sales
- 86% of Canadian communities that adopted formal policies experienced reductions in problems such as underage drinking, fighting, and vandalism
  - London Transport ban on drinking 2008 –assaults on tube staff fell 15%
  - International evidence suggests alcohol-free zones may impact on young people, who tend to drink in parks and other public places
  - USA – bans on alcohol in sports stadiums = reductions in arrests, ejections and assaults

Restriction on availability of retail alcohol sales, Americas

■ Minimum purchase age restrictions

1	1	25	2	4	2

■ 21 years ■ 20 years ■ 18 years ■ 16 years ■ No ■ Data not available

■ Licensing and monopoly system on retail sales

25	7	3

■ Yes ■ No ■ Data not available
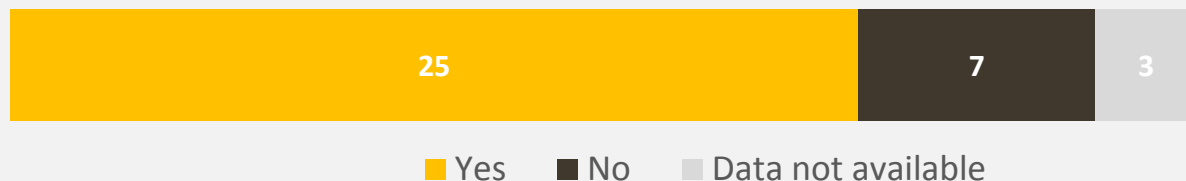
■ Regulating hours, locations and days of retail sales

■ Hours

21	11	3

■ Locations

19	13	3

■ Days

6	26	3

■ Yes ■ No ■ Data not available
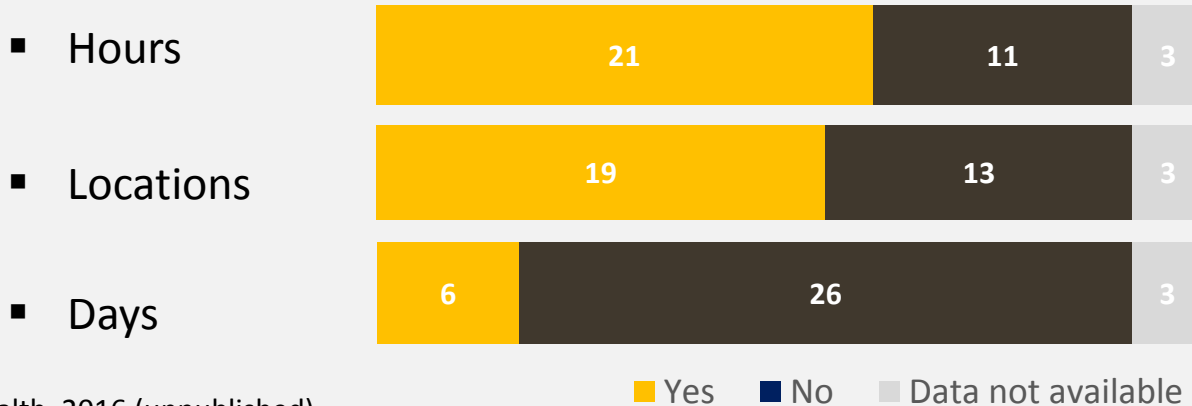
Restriction on availability of retailed alcohol sales

- Restrictions on alcohol consumption in public places
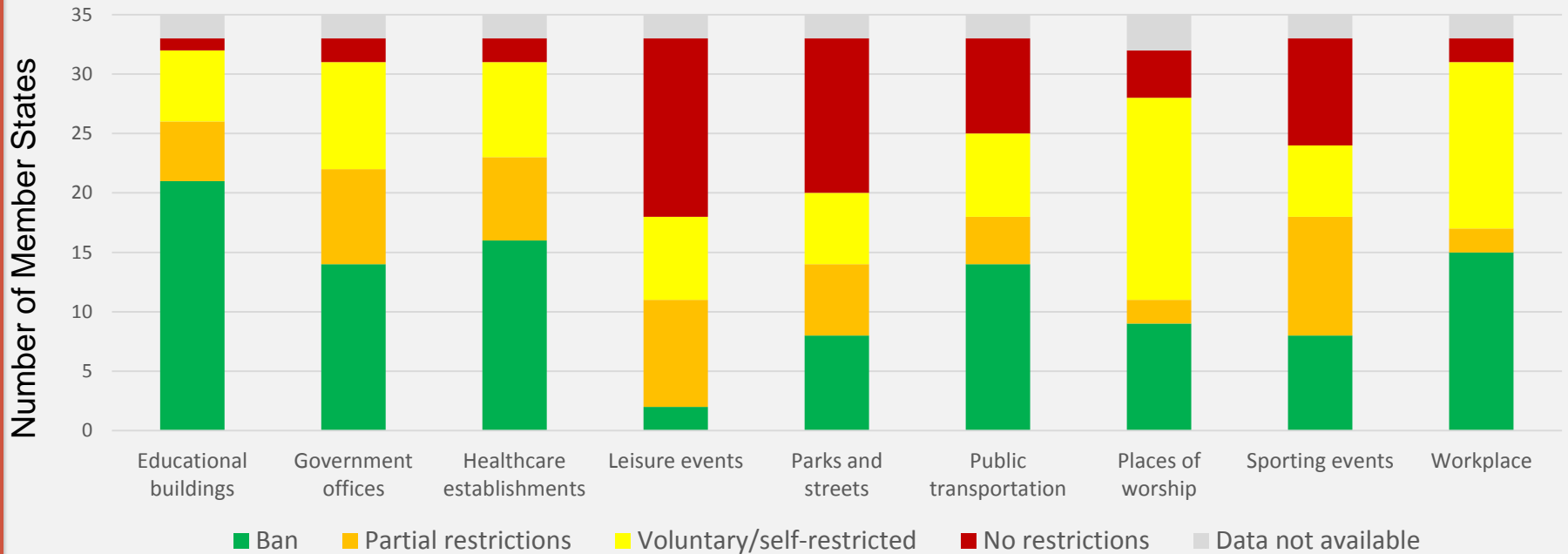
Source: Global Information System on Alcohol and Health. Available at: https://goo.gl/TV7ZXU

Enforcement a critical element

- A licensing system means that the state administration has the ability to suspend or revoke a license in case of noncompliance.

- It is essential that enforcement is consistently applied and that the likelihood of apprehension for breaches is apparent to licensees.

- Enforcement may be undertaken by police alone or by civilian inspectors or community coalitions working in collaboration with police.

- Permit fees may fund dedicated enforcement.

Other enforcement issues

- Include a condition in licenses not to serve the already intoxicated or those under purchase age

- Require responsible service of alcohol training of anyone who is licensed to sell alcohol

- Enforcement should be prepared and designed to monitor sales to the intoxicated and to the underage

- Restrictions on drink promotions should be considered, or the number of drinks which can be purchased at the one time

Illegal/informal alcohol

- Both economic benefits and harms occur within populations occur as a result of unregulated alcohol production and sales

- Licensing small scale alcohol production offers governments a means of regulating production and supply

- Restricting availability of harmful ingredients such as methanol provides an additional means of reducing harms associated with illegal and informal alcohol products

WHO recommendations on illicit or informally-produced alcohol

(a) good quality control with regard to production and distribution of alcoholic beverages;

(b) regulating sales of informally produced alcohol and bringing it into the taxation system;

(c) an efficient control and enforcement system, including tax stamps;

(d) developing or strengthening tracking and tracing systems for illicit alcohol;

(e) ensuring necessary cooperation and exchange of relevant information on combating illicit alcohol among authorities at national and international levels;

(f) issuing relevant public warnings about contaminants and other health threats from informal or illicit alcohol.

3. Modifying the drinking context

- Theoretical assumption: Creating environmental and social constraints will limit alcohol consumption and reduce alcohol–related violence.
- Emergence of youth-oriented vertical drinking establishments = increase in binge-drinking, alcohol related violence and social disorder
- Factors that impact on levels of alcohol related violence include:
  - Overcrowding
  - Poor bar layout/inconvenient bar access
  - Permissive environment
  - Bar workers failing to practice responsible serving
  - Irresponsible promotions e.g., 'happy hour'
- Use of toughened glass has reduced 'glassing' attacks & facial injuries
- Bar staff training – effective if penalties are enforced
- High profile policing in and around licensed areas reduced crime & social disorder:
  - TASC project, Cardiff, increased police enforcement at known problem venues = 4% decrease alcohol-related assaults after 12 months

4. Drink-driving

- Theoretical assumption: Deterrence, punishment, and social pressure will reduce drink-driving.

- Risk of crash increases with increased Blood Alcohol Content (BAC) – Drivers with a BAC of between 0.02 and 0.05 have at least a three times greater risk of dying in a vehicle crash. This risk increases to at least six times with a BAC between 0.05 and 0.08

- Most countries have *per se* **laws** concerning specific BAC levels at which a driver is presumed to be impaired and can be arrested

- A BAC of 0.05% (0. 5 mg/ml) is the standard in many countries

- Policies that lower BAC limits consistently reduce drink-driving

- Relevance to cancer prevention is degree to which they may reduce overall consumption

Drink-driving countermeasures

- **Low blood alcohol level for young / novice drivers (less or equal to 0.02g/dl)**

5	15	5	5	5

Legend: BAC ≤ 0.02g/dl | BAC = 0.03-0.04 g/dl | BAC = 0.05-0.08 g/dl | BAC >0.08 g/dl no law | No data
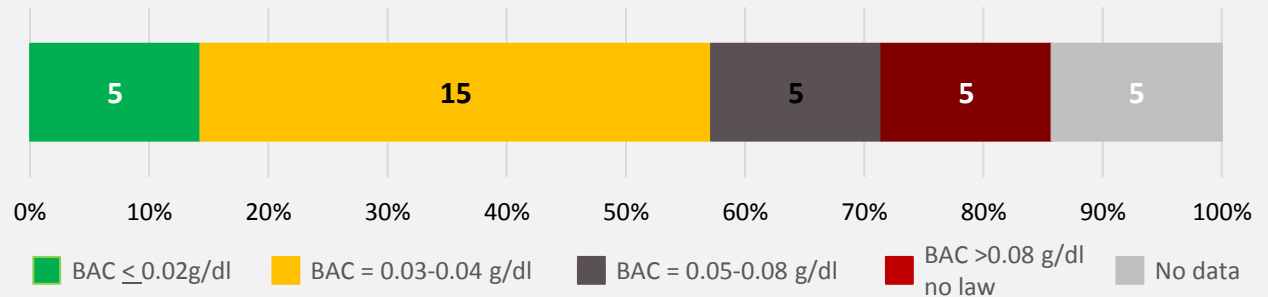
- Reduction of the blood alcohol level to BAC equal to or less than 0.05/dl

5	9	16	5

Legend: BAC ≤ 0.05g/dl | BAC > 0.05-0.08 g/dl | BAC >0.08 g/dl - no law | No data

Source: Global Survey on Alcohol and Health (GSHA), 2016. (unpublished)
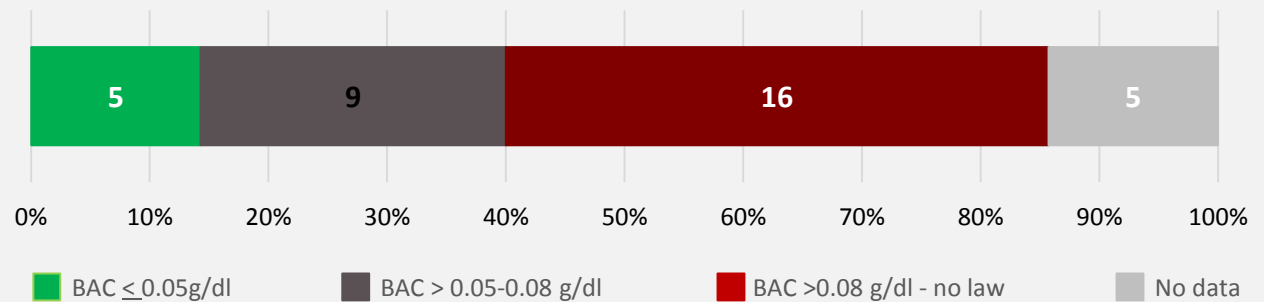
Drink-driving enforcement and penalties

- Without enforcement the effects diminish over time
- Random breath tests – Highly visible, non-selective testing can have a sustained effect in reducing drinking-driving and the associated crashes, injuries, and deaths
- Penalties need to be severe enough to act as a deterrent – license revocation/fines/imprisonment
- Zero tolerance laws for young and novice drivers have been proven to reduce youth casualties and fatalities

FIGURE 32. Average perceived score of enforcement of maximum blood-alcohol-concentration-level policies, WHO Regions and worldwide, 2012.
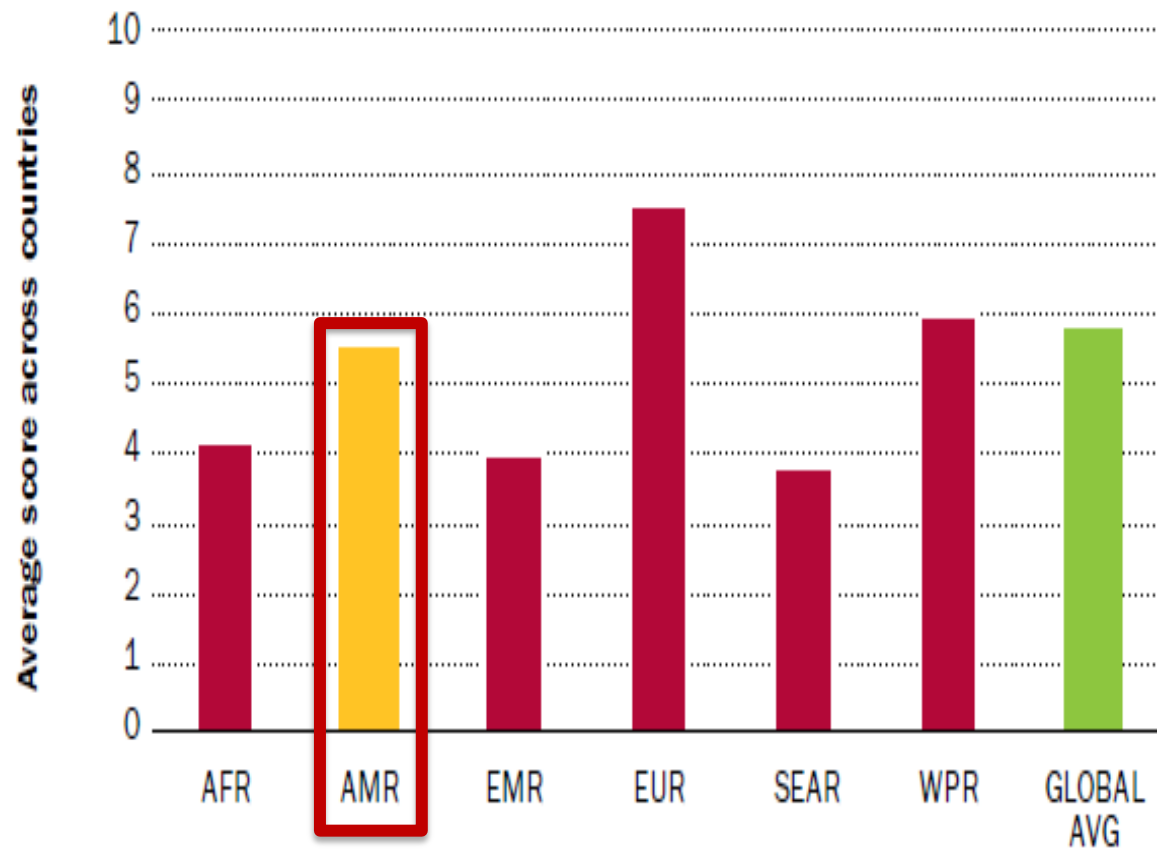
5. Education strategies

- Theoretical assumption: Health information that increases knowledge and changes attitudes will prevent drinking problems.

- School-based alcohol education programs are among the most popular types of prevention programs for policymakers.

- Approaches include:
  - mass media campaigns
  - alcohol warning labels
  - school-based alcohol education

Mass media campaigns: Public service announcements (PSAs)

- Messages prepared by Governments, NGOs, health agencies, and media organizations that deal with responsible drinking, the hazards of drinking-driving, and related topics

- Despite their good intentions, PSAs are an ineffective antidote to the high-quality pro-drinking messages that appear much more frequently as paid advertisements in the mass media

Alcohol warning labels: examples

SOUTH AFRICA

FRANCE

THAILAND
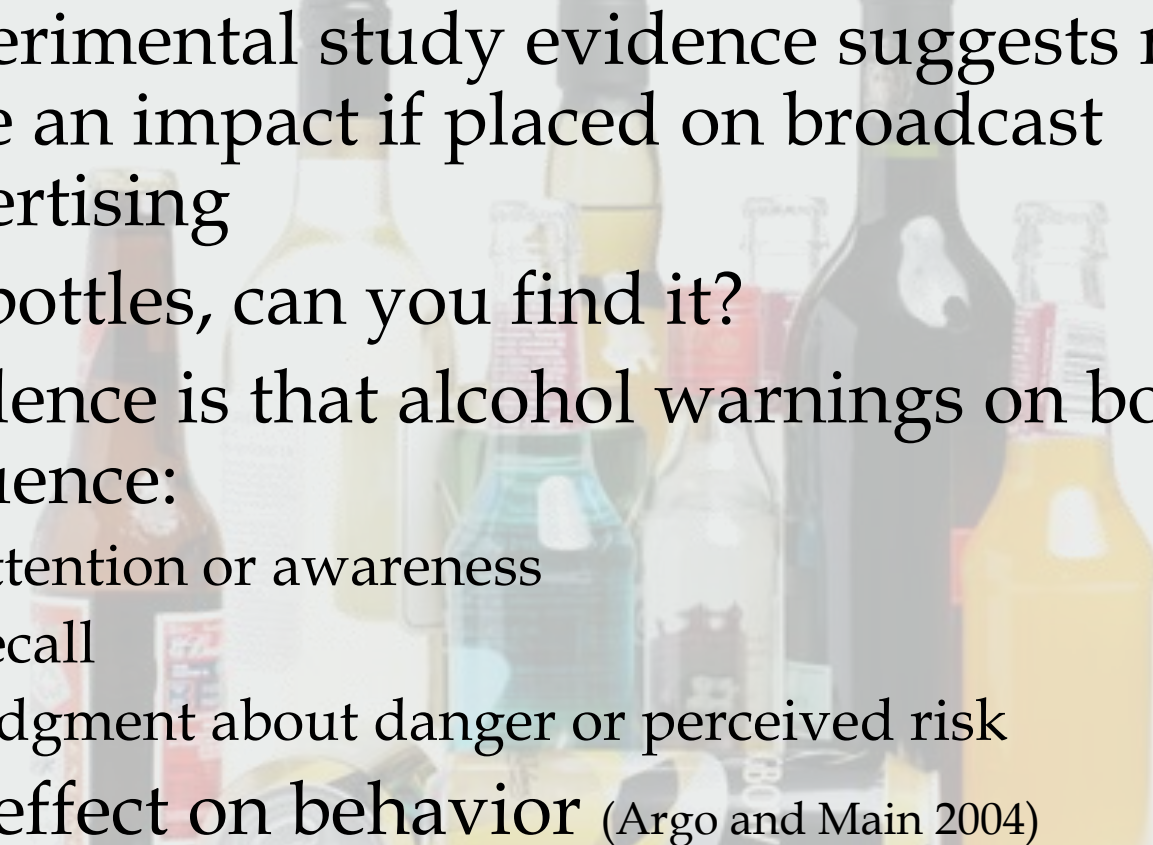
AUSTRALIA

Warning labels

- Emphasis has been placed on the potential for birth defects when alcohol is consumed during pregnancy, and the danger of alcohol impairment when driving

- Some evidence that warning labels impact knowledge, awareness, intentions and perceptions

- No convincing evidence of an effect on alcohol consumption and driving after drinking

Alcohol warning labels

- Experimental study evidence suggests might have an impact if placed on broadcast advertising
- On bottles, can you find it?
- Evidence is that alcohol warnings on bottles influence:
    - Attention or awareness
    - Recall
    - Judgment about danger or perceived risk
- *NO* effect on behavior (Argo and Main 2004)

School-based alcohol education programs

- Can increase knowledge and change attitudes toward alcohol, but do not change drinking behavior
- Modest changes in drinking have been associated with programs that include both resistance skills training and normative education

Summary: Information – education – communication

- Education strategies in the absence of changes in the environment have shown little or no effect, regardless of the approach taken or the level of investment

- Many countries include information about alcohol in health curriculum/ lifestyle education

- They can increase knowledge but won't change behavior

- Among the hundreds of studies, only a few show lasting effects (after 3 years)

- Even comprehensive programs may not be sufficient to delay initiation of drinking or sustain small reductions after program ends

- Programs with multiple interactive components that resemble family therapy and brief intervention seem to have some potential

- Many programs shown to be ineffective continue to be used

6. Regulating alcohol promotion

- Theoretical assumption: Reducing exposure to marketing, which normalizes drinking and links it with social aspirations, will slow recruitment of drinkers and reduce heavier drinking by young persons.
- The marketing of alcohol is a global industry
- Alcohol brands are advertised through television, radio, print, point-of-sale promotions, and the Internet
- Strong evidence that exposure to alcohol marketing:
  - Reduces age at which drinking starts
  - Increases the amounts drunk by young people

Policy options for alcohol marketing

- No regulation
- Industry self-regulation
- Co-regulation
- Partial bans
- Total bans

Marketing policy options

- Total ban
  - Easiest to implement
  - Least expensive to implement
  - Research base is not extensive, because most "natural experiments" are increasing marketing
  - Will generate significant alcohol industry opposition
    - Will claim hurts competition
    - In fact, current high marketing spend creates high barriers to entry that already hurt competition

Marketing policy options

- Partial bans
  - Content-specific
  - Time-specific
  - Audience-specific
  - Beverage-specific
  - Medium- or channel-specific
  - Location-specific
  - Event-specific

- Again, research base not as broad as for the other best buys – clearest case is that marketing exposure affects youth drinking

Regulation of marketing – the current landscape

- Reliance on voluntary marketing codes set by industry
- Typically address *content*, not *volume* of marketing
- Codes often state that alcohol marketing:
  - Must not be aimed at young people or depict young people in ads
  - Must not link alcohol consumption to social/sexual success, enhanced physical performance or driving
  - Must not make therapeutic claims
  - Must not encourage immoderate consumption or present abstinence in a negative light
  - Must not portray intoxication and risky behavior
- Note – promotion by price often not included
- Studies in Canada, the UK, Australia, Brazil, USA, the European Union and Ireland show that self-regulation codes are systematically violated by beer and spirits producers in terms of youth exposure, objectionable content, and complaint processing

Examples of alcohol marketing

Alcohol advertising

Percentage of countries that have restrictions on the marketing of the most popular alcoholic beverages on national television, by type of restriction, Region of the Americas, 2012.

No restrictions 65%

Almost **70**% of the Region's countries have **no regulations** in place on marketing alcohol on national television or have only self-regulation by the alcohol industry. Voluntary self-regulation codes are largely ineffective.

Ban 12%

Voluntary/self-restricted 3%

Partial restriction 20%
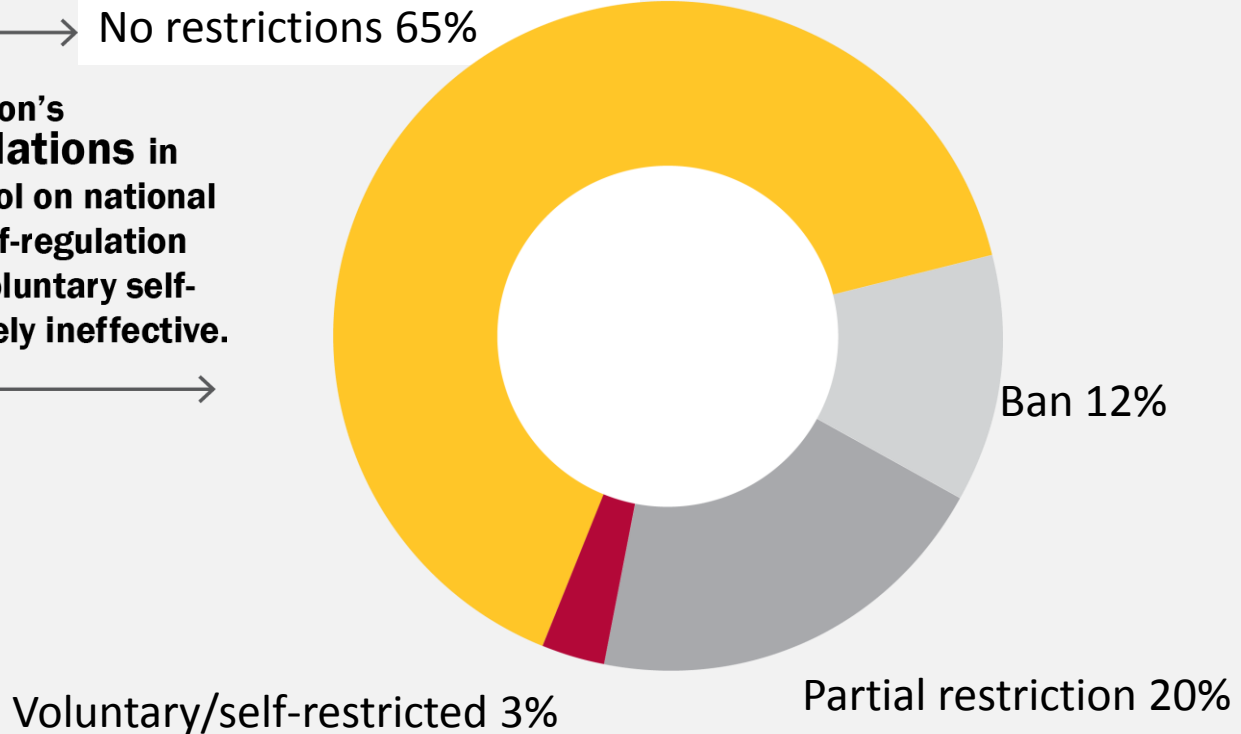
Alcohol advertising

Restrictions on advertising for beer, PAHO Member States, 2012
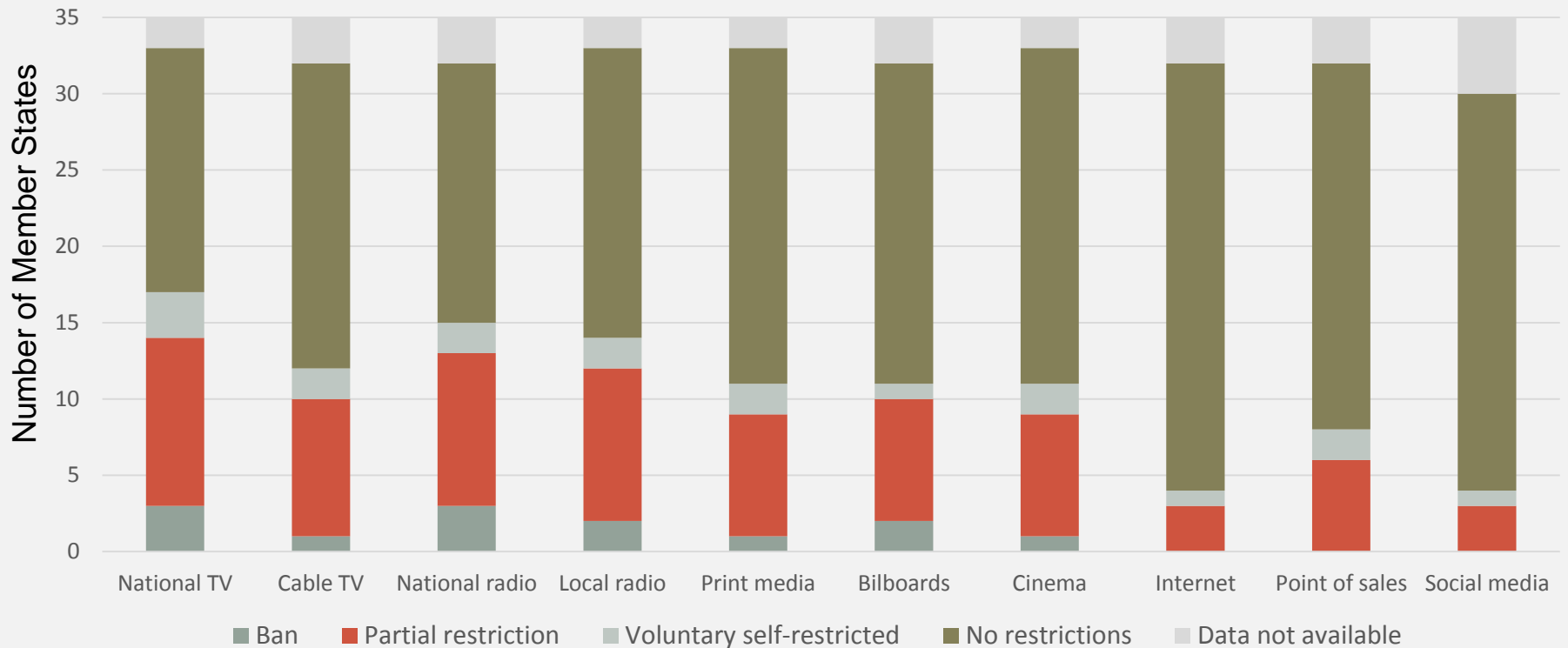
Source: Global Information System on Alcohol and Health. Global Survey on Alcohol and Health, 2012.Available at: https://goo.gl/TV7ZXU

Industry self-regulation codes

- Self-regulation tends to be fragile and largely ineffective

- These codes may work best where the media, advertising, and alcohol industries are all involved, and an independent body has powers to approve or veto advertisements, rule on complaints, and impose sanctions

- Few countries currently have all these components

Controls to reduce exposure

- Exposure restrictions limit advertising to certain hours of the day, and forbid alcohol ads on programs likely to be watched by children

- Despite these voluntary guidelines, children and adolescents are exposed to large amounts of alcohol marketing in countries without total bans

Model policy: Loi Evin

- Passed in 1985 but not defined and enforced until 1991
- Definition of alcoholic drinks (1.2% or more alcohol by volume)
- No advertising targeted at young people
- No ads on TV or in movies
- No sponsorship of cultural or sporting events
- Advertising permitted only in the press for adults, on billboards, on radio
- Messages and images should refer only to the qualities of the product such as origin, composition, production, etc.
- A health message must be included on each ad

Conclusions and policy implications

- A marked increase in alcohol marketing, especially in emerging markets

- Unprecedented levels of exposure of young persons to sophisticated marketing

- Voluntary codes of content have been shown to be ineffective in a variety of countries

- Unlike tobacco, there is, as yet, no international or regional agreement to restrict alcohol marketing

7. Treatment and early intervention services

- Theoretical assumption: Alcohol dependence will be prevented by motivating heavy drinkers to drink moderately; various therapeutic interventions will increase abstinence among persons who have developed a dependence on alcohol.

- Interventions for non-dependent high-risk drinkers consist of one to three sessions of counseling or advice delivered in general medical settings

- Interventions for alcohol dependence consist of individual and group therapy to maintain abstinence and mutual help societies to support long-term recovery

Effectiveness of brief intervention and treatment services

- Randomized controlled trials show that interventions and brief advice reduce alcohol problems amongst non-dependent high risk drinkers

- In general, exposure to any treatment is associated with significant reductions in alcohol use and related problems, regardless of the type of intervention used.

- Access to services and resource allocation are important for success of any kind of treatment and brief intervention

Health services response

- Screening and brief intervention with referral to treatment (SBIRT)
- National guidelines on brief intervention and treatment

Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development   A/RES/71/313

Annex

Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development

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

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

3 GOOD HEALTH AND WELL-BEING

Case study: Russian Federation

- Steps taken:
  - 2008:
    - Ban on alcohol ads on public transport
    - 10% increase in excise duties per year
  - 2010:
    - Adopt national programme to reduce alcohol-related harm
    - Set minimum retail price for beverages >28% ABV
    - Zero tolerance for drink driving
  - 2012:
    - Ban on beer sales in certain public places
    - Ban on internet alcohol advertising
  - 2013:
    - Ban on alcohol advertising in print
  - 2014:
    - Increase in excise duty by 33%

Death rate from alcohol use per 100 000 population in the Russian Federation,[a] WHO European Region, and upper middle-income countries (UMIC), 2000–2015

- UMIC, males
- UMIC, females
- EUR, males
- EUR, females
- Russian Federation, males
- Russian Federation, females
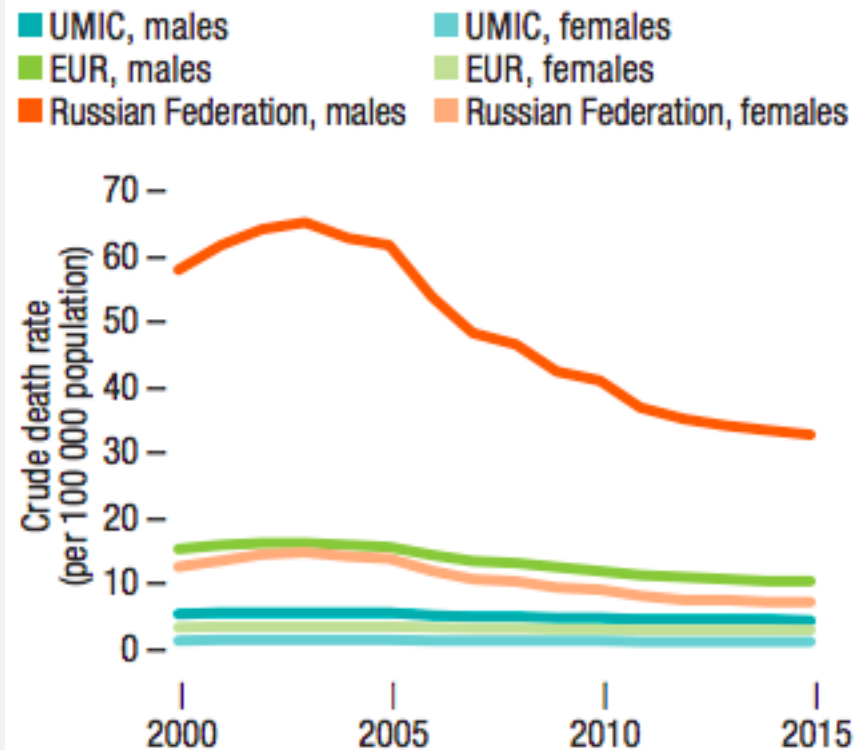
Other developments…

- Estonia – substantial drop in PCC
  - Large increase in excise taxes
  - Considering ad ban
- Lithuania
  - Advertising ban due to go into effect January 1
- Finland
  - Ban on alcohol advertising in public places
  - Ban on internet advertising that encourages any kind of user participation
- Scotland
  - Due to introduce minimum unit pricing on alcohol in May 2018, after years of court challenges

Conclusions

- Alcohol problems can be minimized or prevented using a coordinated, systematic policy response.

- Alcohol policies that limit access to alcoholic beverages, discourage driving under the influence of alcohol, reduce the legal purchasing age for alcoholic beverages, limit marketing exposure and increase the price of alcohol, are likely to reduce the harm linked to drinking

- In most countries, taxation offers the most cost-effective strategy, but there are exceptions owing to illicit production

- The known effective interventions produce a favorable health return for cost incurred in policy implementation