

First Panamerican Network Meeting on Alcohol and Public Health. (PANNAPH)

"Public policies for the control of harmful alcohol use"

Alcohol use in Mexico and the Public Health Response.

María Elena Medina-Mora

Instituto Nacional de Psiquiatría Ramón de la Fuente



Comisión Nacional
contra las Adicciones



**Organización
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Oficina Regional de la
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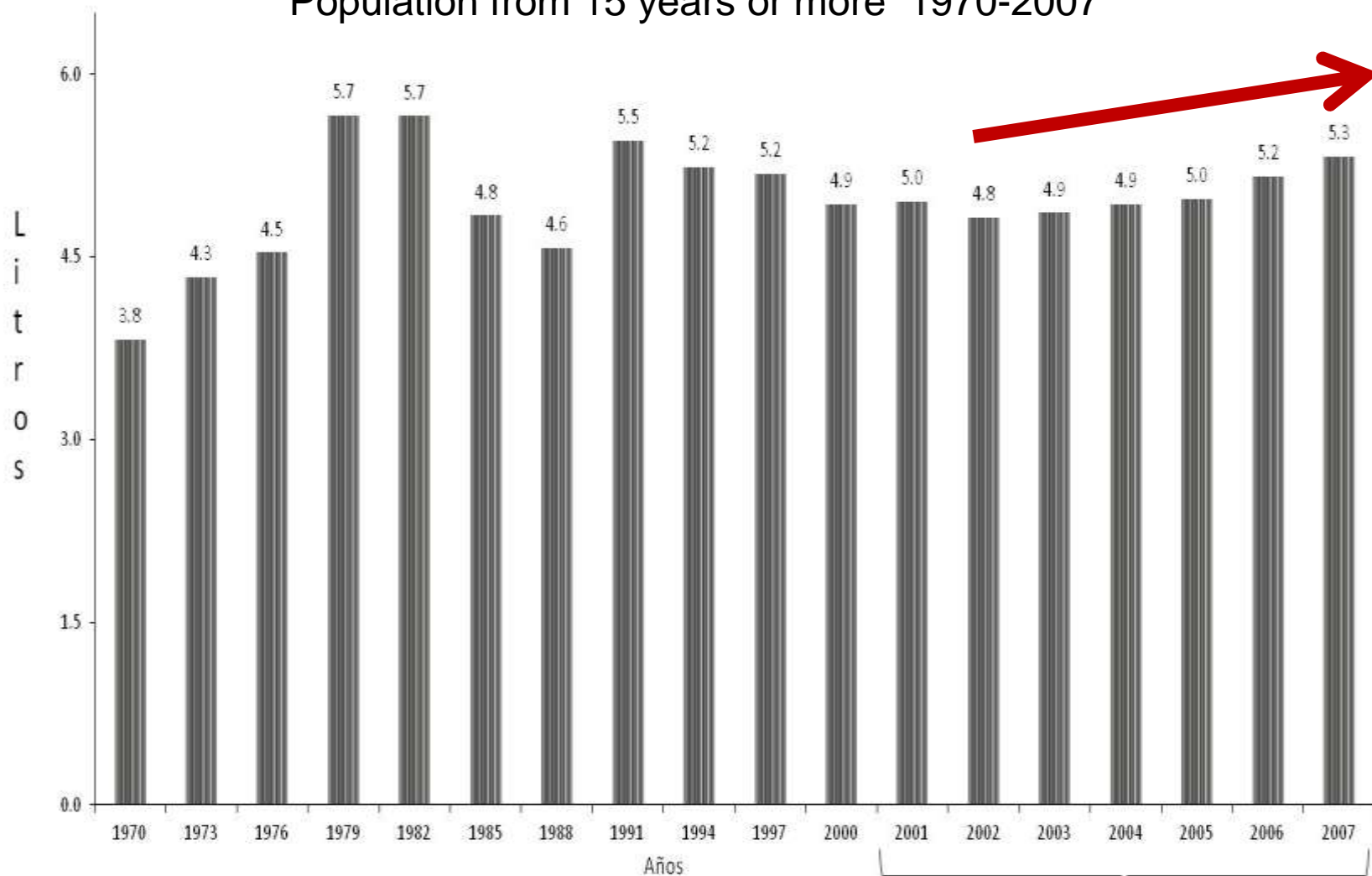


Alcohol use in Mexico and the Public Health response.

Content

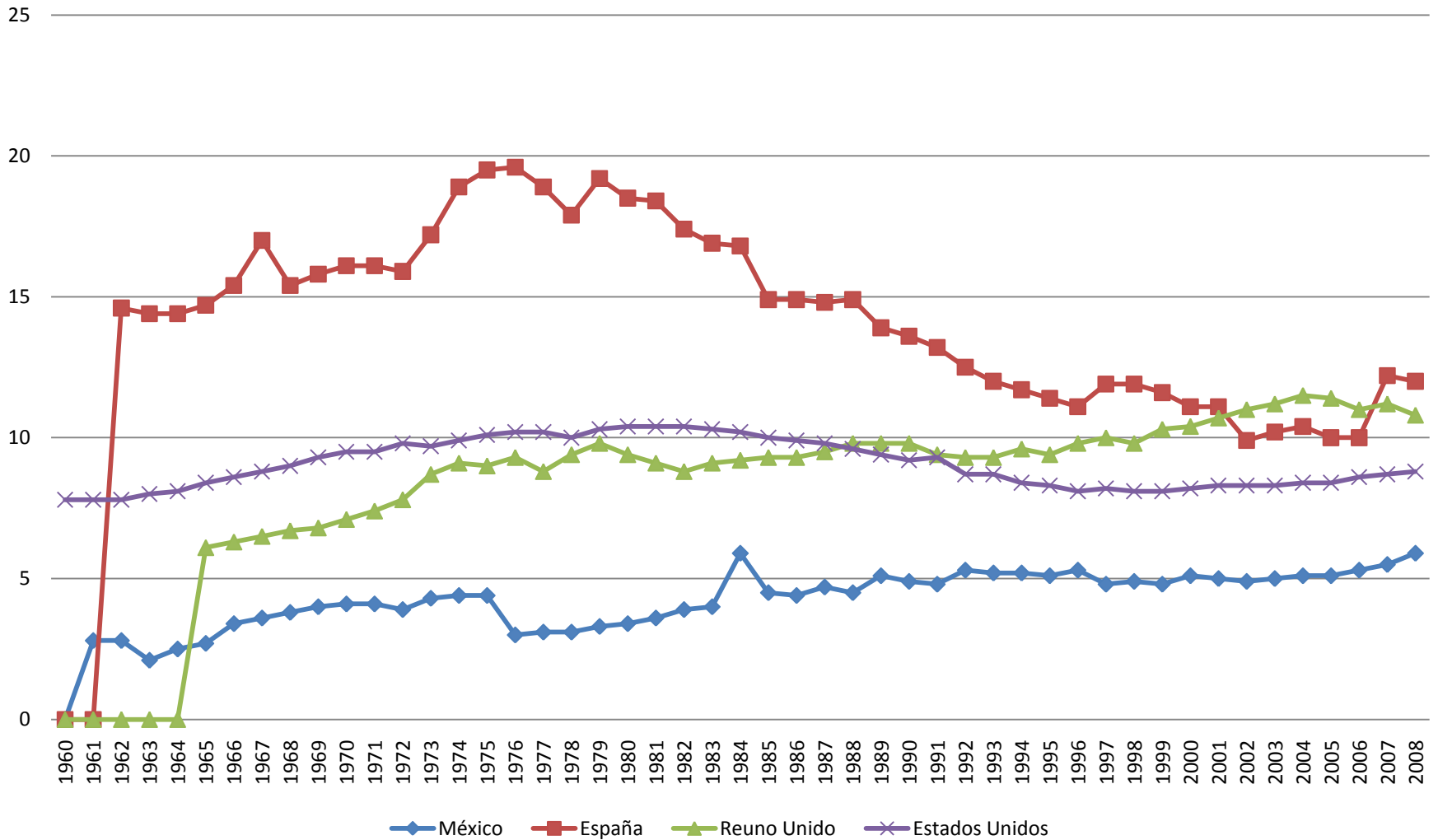
- *¿How much alcohol we drink in the region and Mexico?*
- *¿How we drink? ¿Why do we have so many related problems?*
- *¿Which are our main related problems?*
- *¿Where are we, compared with other Countries?*
- *¿What can be and has been done to face the problem?*

Ethanol *per capita* consumption (in liters) in México: Population from 15 years or more 1970-2007



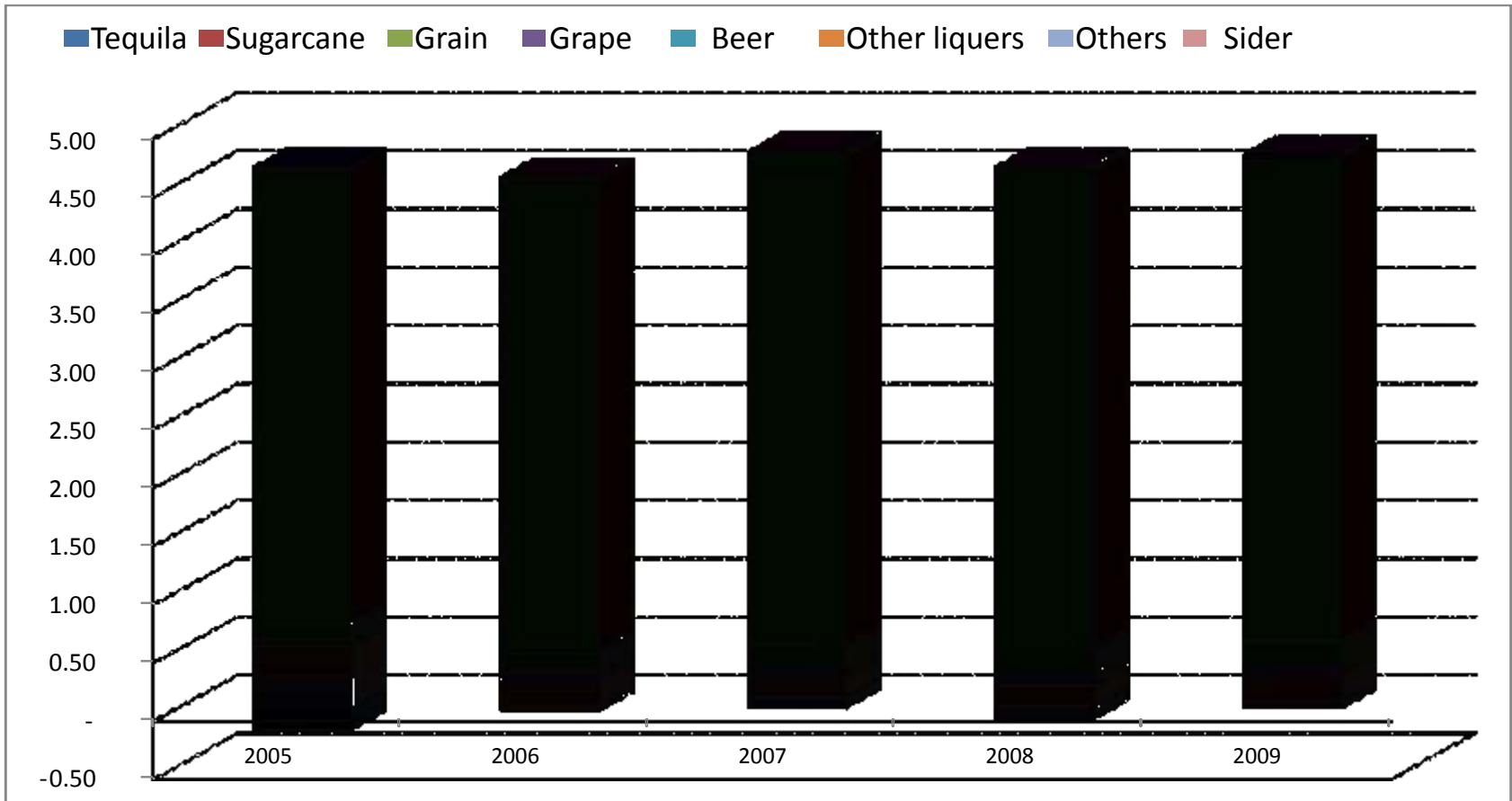
Sources: Alcohol Industry, 1970-1995.
Monthly Industry Survey INEGI, 1996-2000.
** Monthly financial reports of the Industry from the Mexican Stock Market, 2003-2007
CONAPO/SSA. Estimates based on Mexican population projections, 1970-2030. CONAPO, 2006.

Per capita alcohol intake 1960-2008

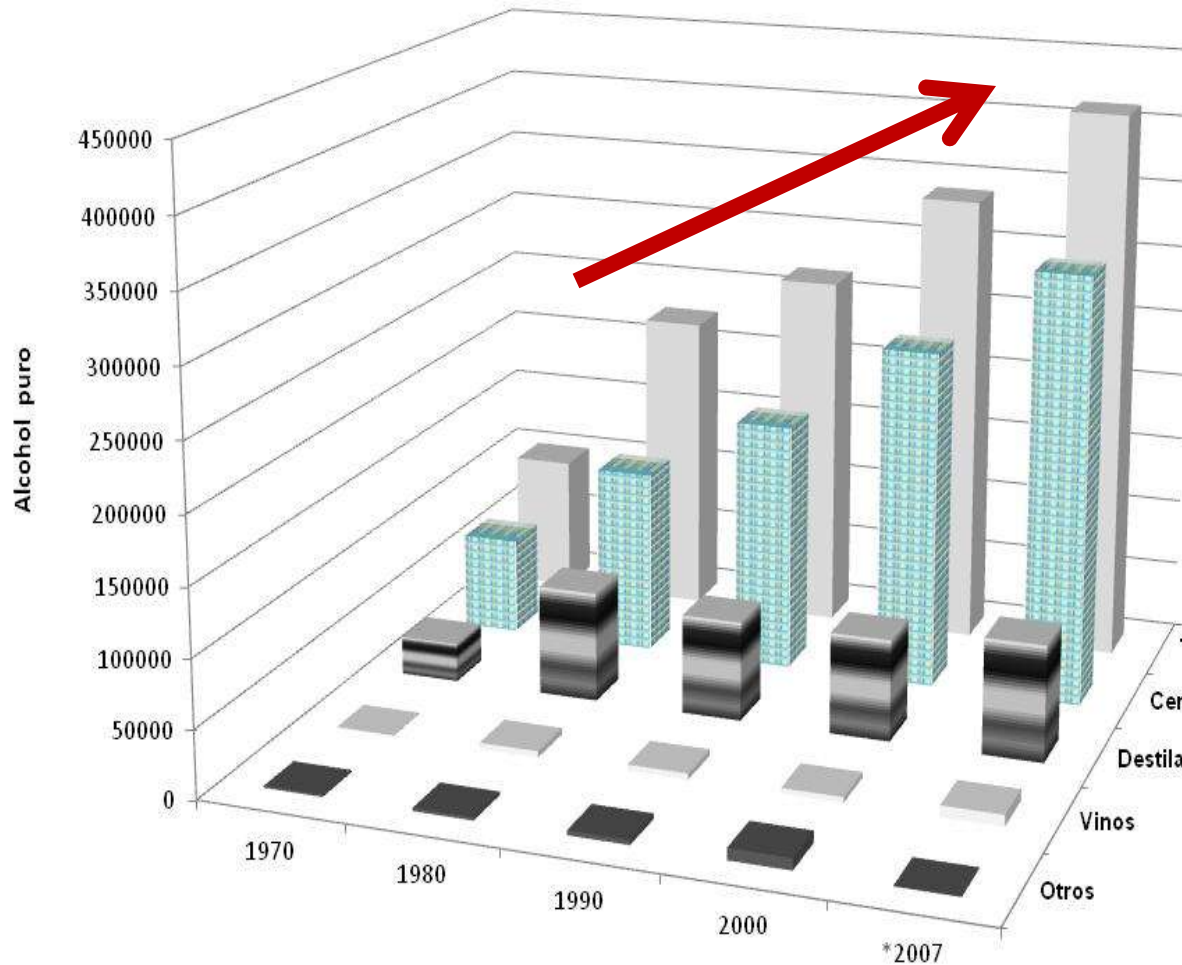


Alcohol Beverage type Preference in México

(Per Capita Pure alcohol in liters 18 years old or more)



Sales Evolution of Alcoholic Beverages in Mexico. (Thousands of liters of Pure Alcohol). 1970-2007



	Porcentaje de variación		
	1980-2000	1990-2000	1970-2000
Total	+ 50.7	+ 27.1	+ 235.8
Cerveza	+ 84.2	+ 36.0	+ 250.8
Destilados	- 8.0	+ 1.5	+ 161.6
Vinos	- 13.7	- 12.1	+ 536.6
Otros	+ 275.3	+ 145.6	+ 467.5 ^a

Fuente: Industria de bebidas alcohólicas, 1970-2000.

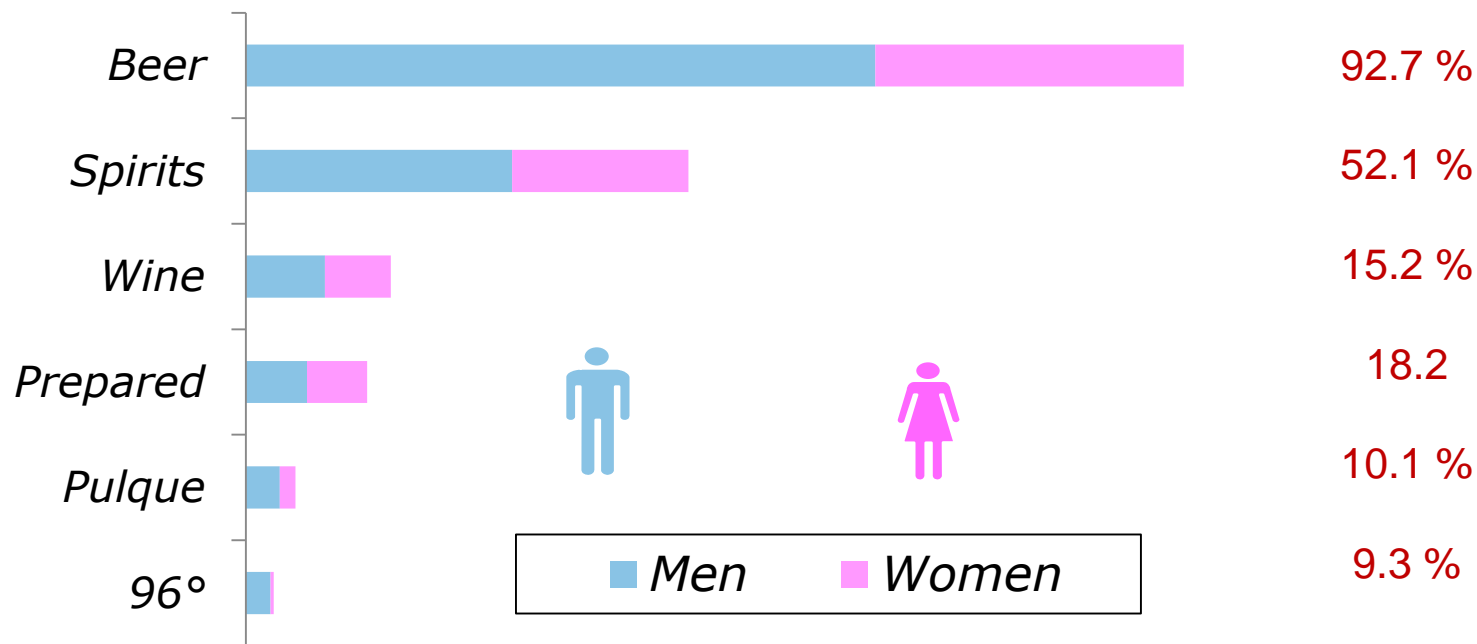
*Canadian: Beer production by country, 2000-2009; IWSR: Alcohol consumption by country and beverage strength, 2000-2008.

^aComparación realizada con base al primer año de la información disponible (1977).

Beverages of Choice

by sex, 12 – 65 years old

Proportion with abuse /dependence



The order of preference for type of beverage is similar in men and women.
 The biggest difference between the sexes is observed in alcohol of 96 °
 with 8.5 men for every woman.
 The probability of developing case with consumption of all beverages

Unregulated market of alcohol beverages in Mexico, 2008 By AGE

Liters of pure alcohol added by Unregistered Market				
	ANC Total Option 1 (Calculation based on national data beer)	ANC Total Option 2 (Beer and Coolers)	ANC Total Option 3 (Beer, coolers and wine)	Mean
Apparent National Consumption per person from 12 to 65 years	1.10	0.73	0.51	0.78
Apparent Domestic Consumption per person for Age +15	1.11	0.74	0.52	0.79
Apparent Domestic Consumption per person for Age + 18	1.22	0.80	0.56	0.86

**Provides 0.78 liters of pure alcohol per capita aged 12 years;
0.79 liters of pure alcohol per capita for + 15 years, and
0.86 liters of pure alcohol per capita for + 18 years.**

*The need for comprehensive, culturally sensitive,
and evidence-based public policies.*

Formal market in Mexico:

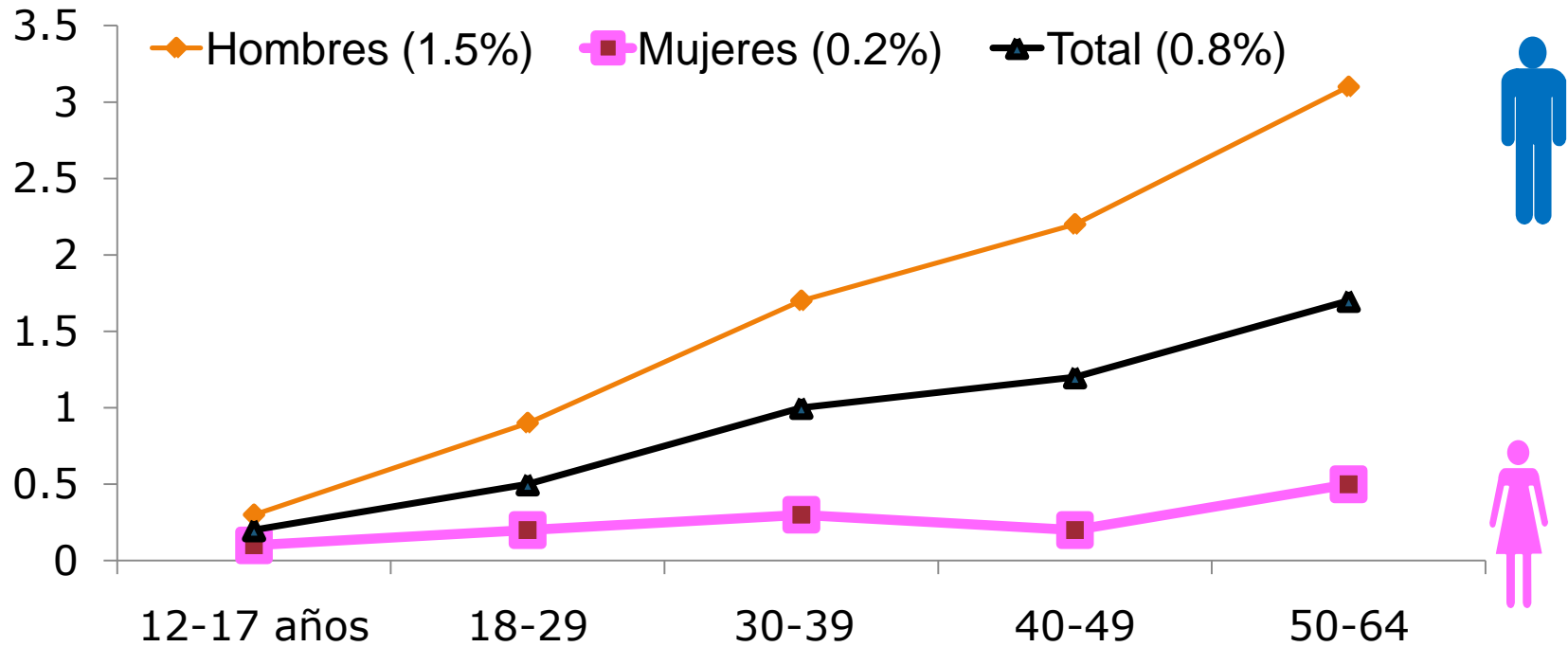
**359.6 million liters of pure alcohol,
4.8 liters per person older than 15 years.**

**The indicator grows from 5.3 to 5.9
liters per capita,**

Informal alcohol adding half a liter - one liter.

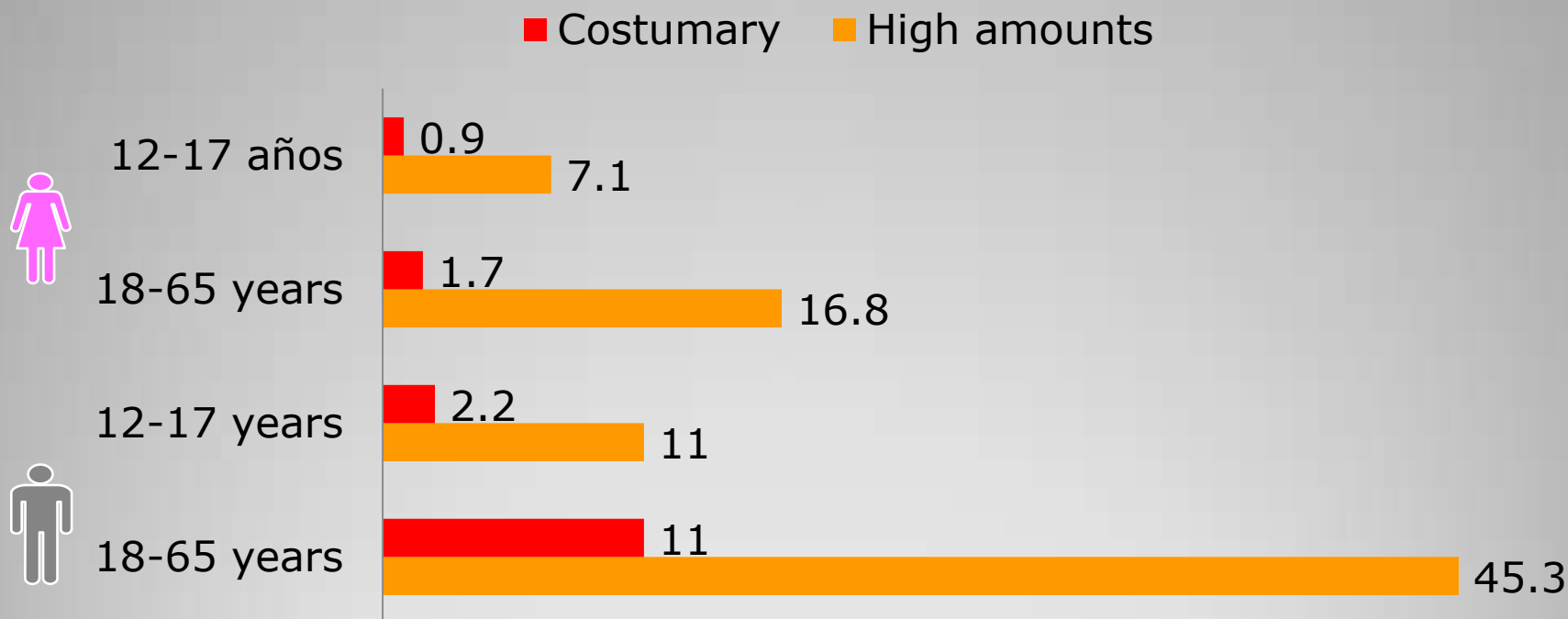
Daily Intake Index.

By gender between 12 and 65 years old.



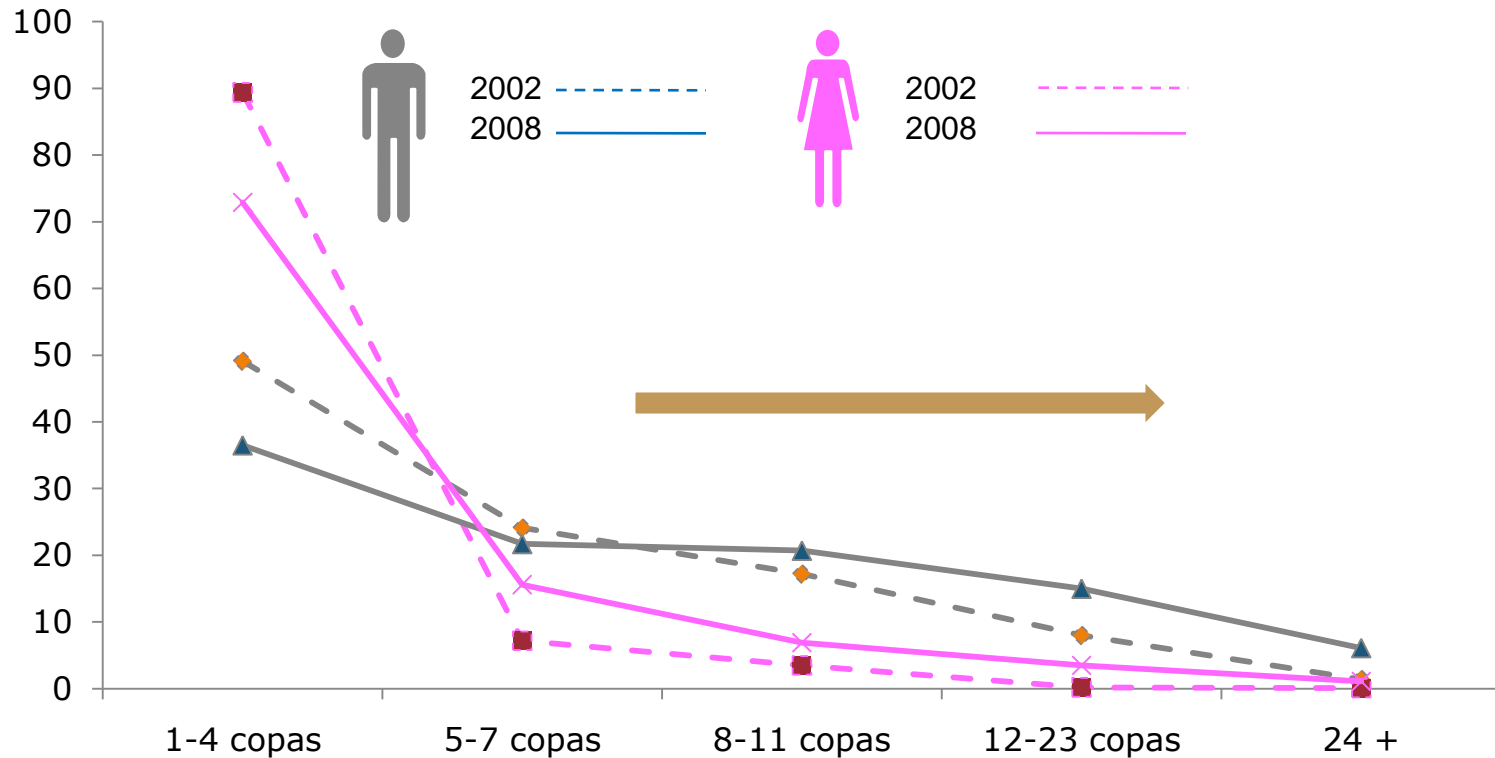
Daily intake is not frequent in general population. It is more common in men and it increases with age.

Proportion of male and female who drink high quantities.



- *The usual intake pattern is high quantities per event.*
- *Adolescent population mimics the adult intake patterns.*
- *Differences between male and female intake are less evident in minors*

Number of Alcoholic beverages consumed per event. *Trends.*

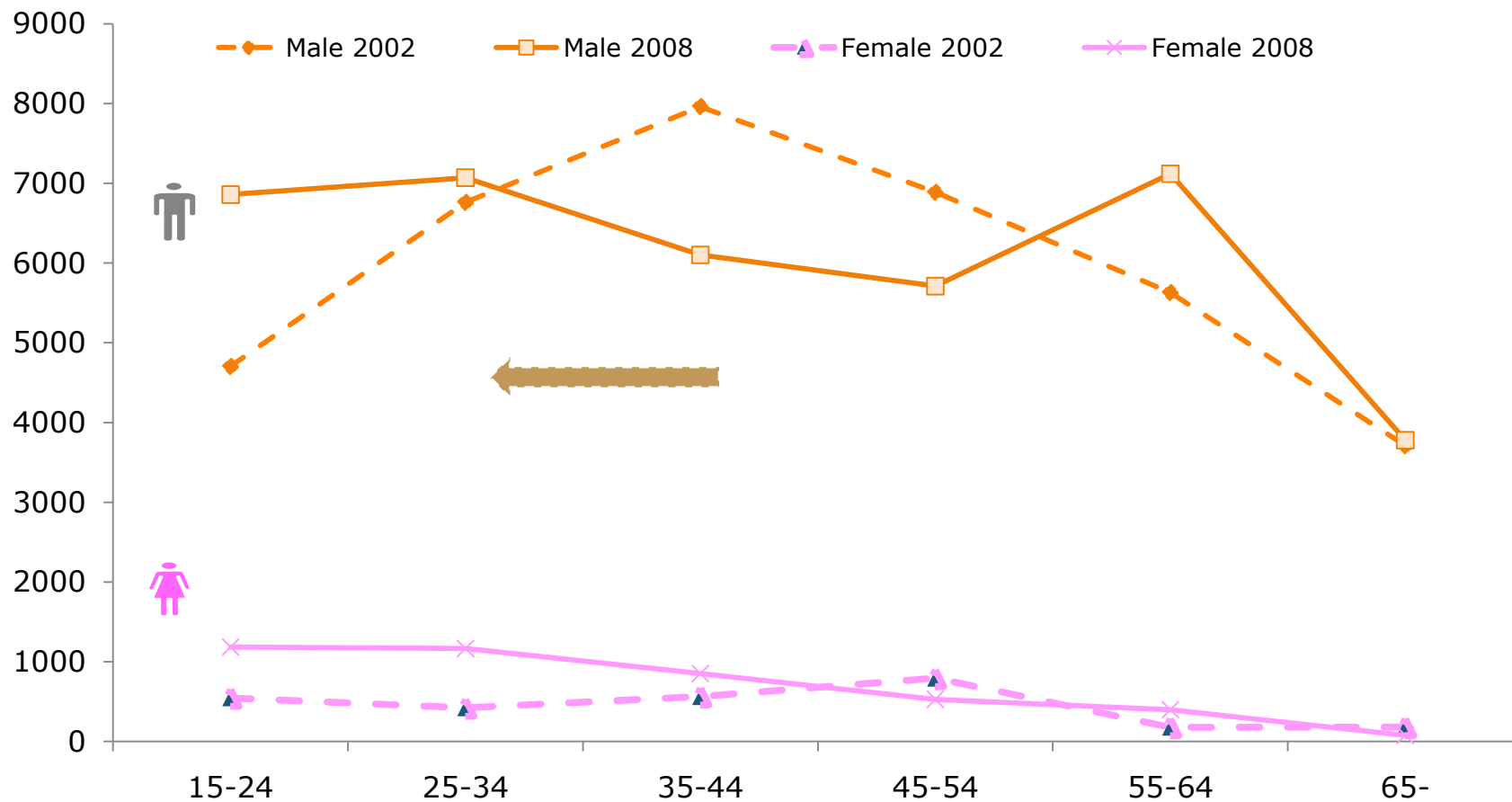


*Between 2002 and 2008 the proportion who drinks low amounts per event decreased
Male and Female increased the number of drinks consumed per event.*

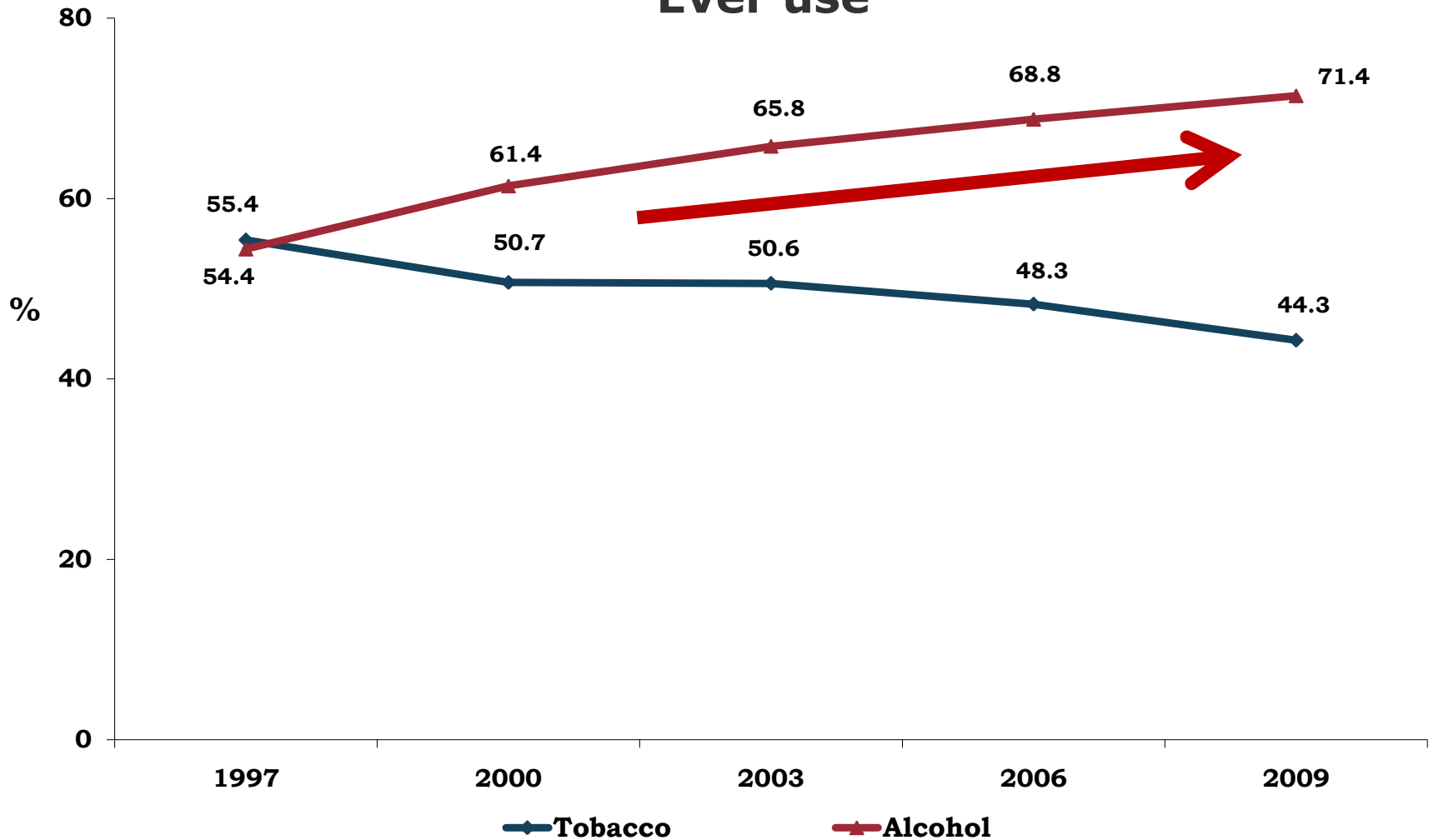
Gender and Alcohol Intake in Mexico, 2002-2008

Per capita.

	2002	2008
Male	6251	6557
Female	518	911

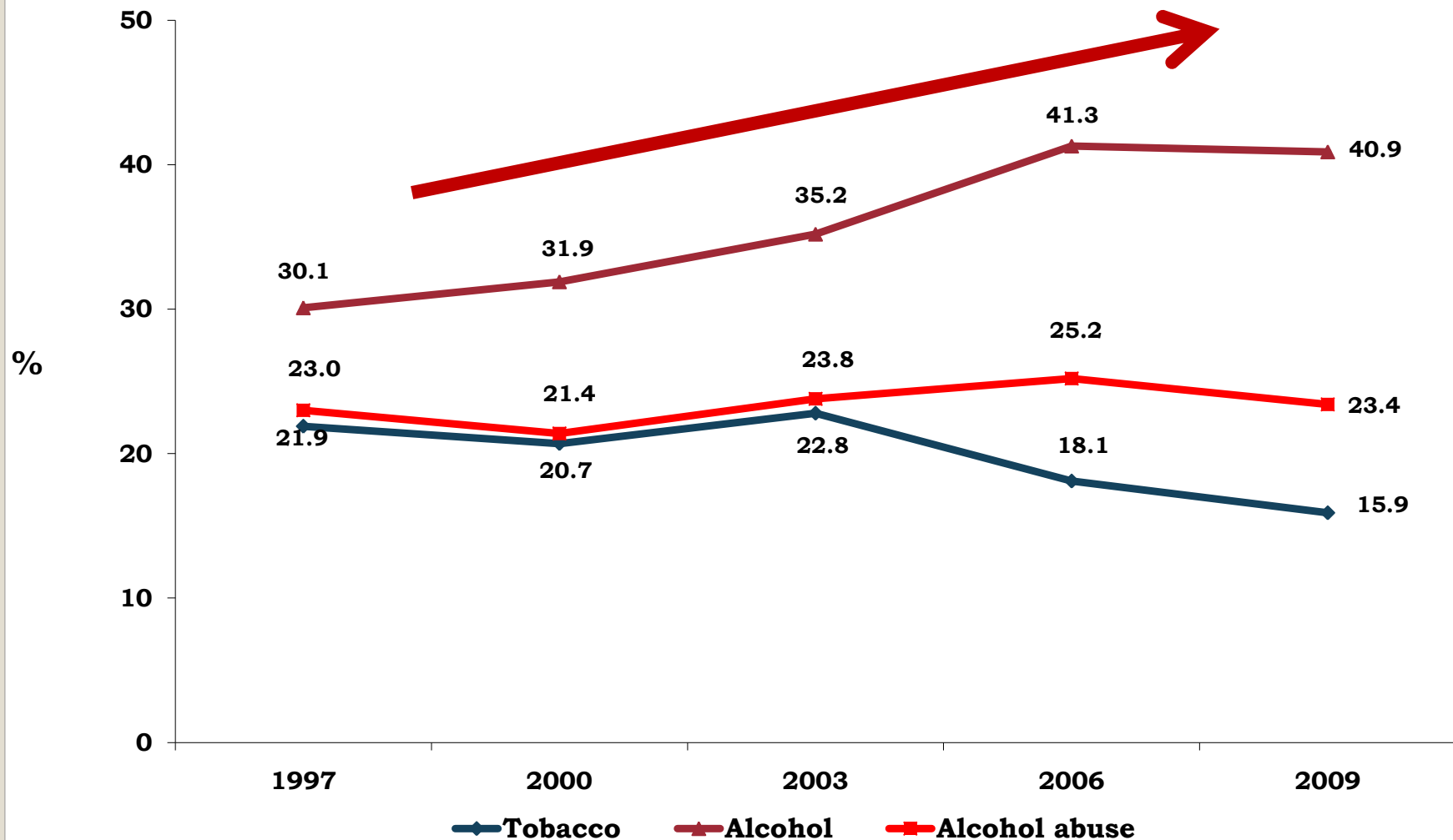


Alcohol and Youth: Tobacco and Alcohol consumption among Mexico City Students. 2009: Ever use



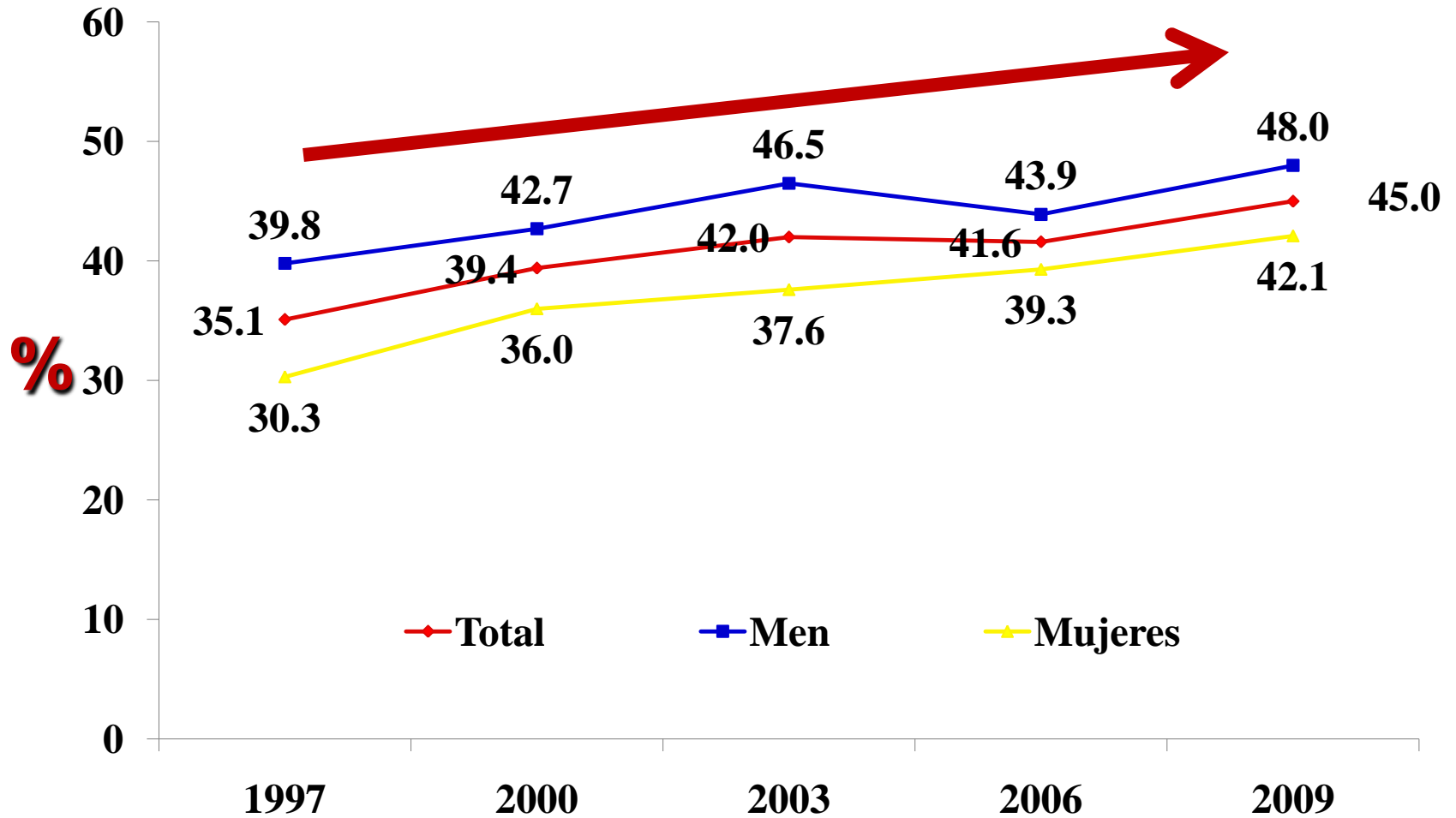
Source: Villatoro et al, 1997, 2000, 2003, 2006, 2010

Tobacco and alcohol Consumption among Students in the last month.

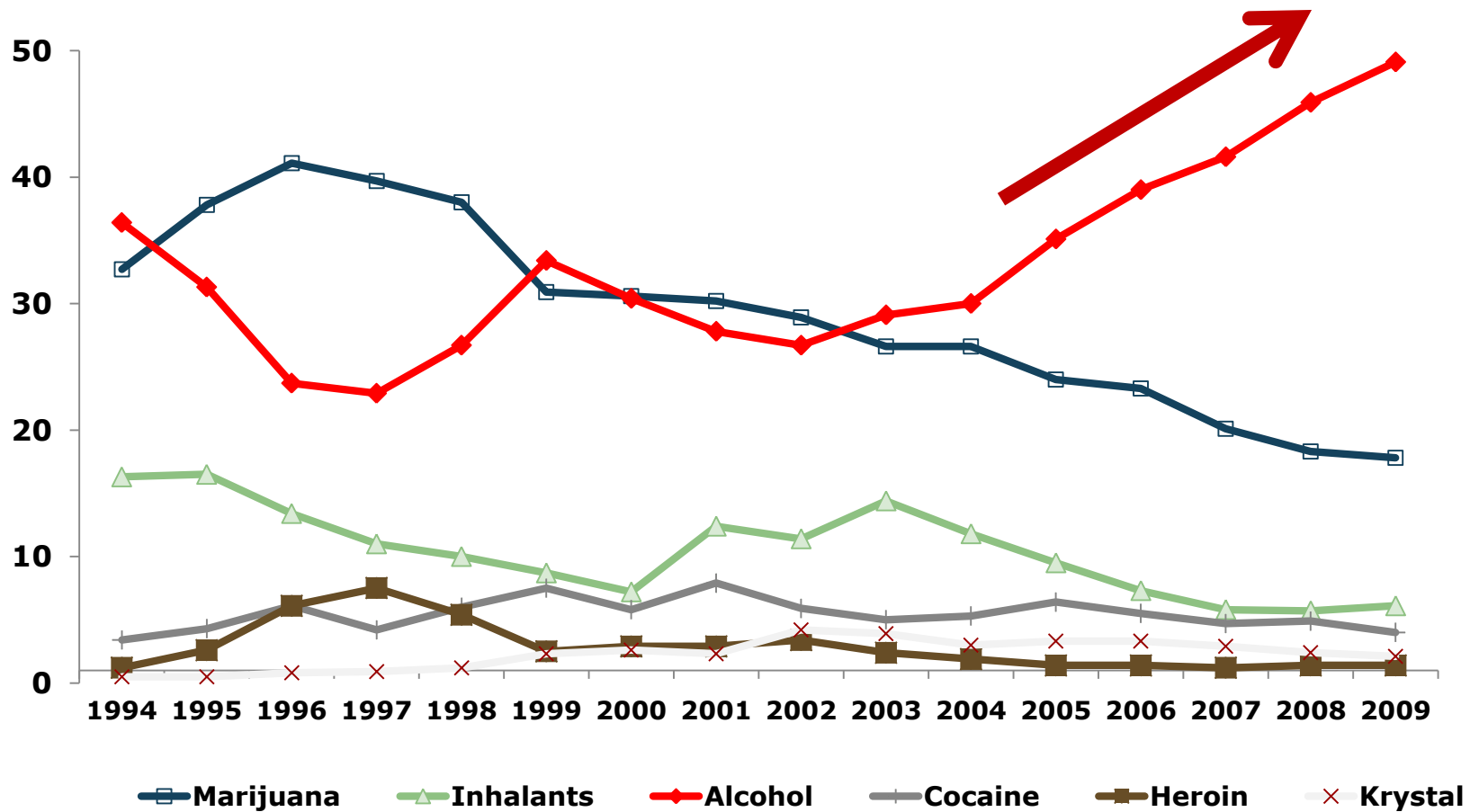


Source: Villatoro et al, 1997, 2000, 2003, 2006, 2010

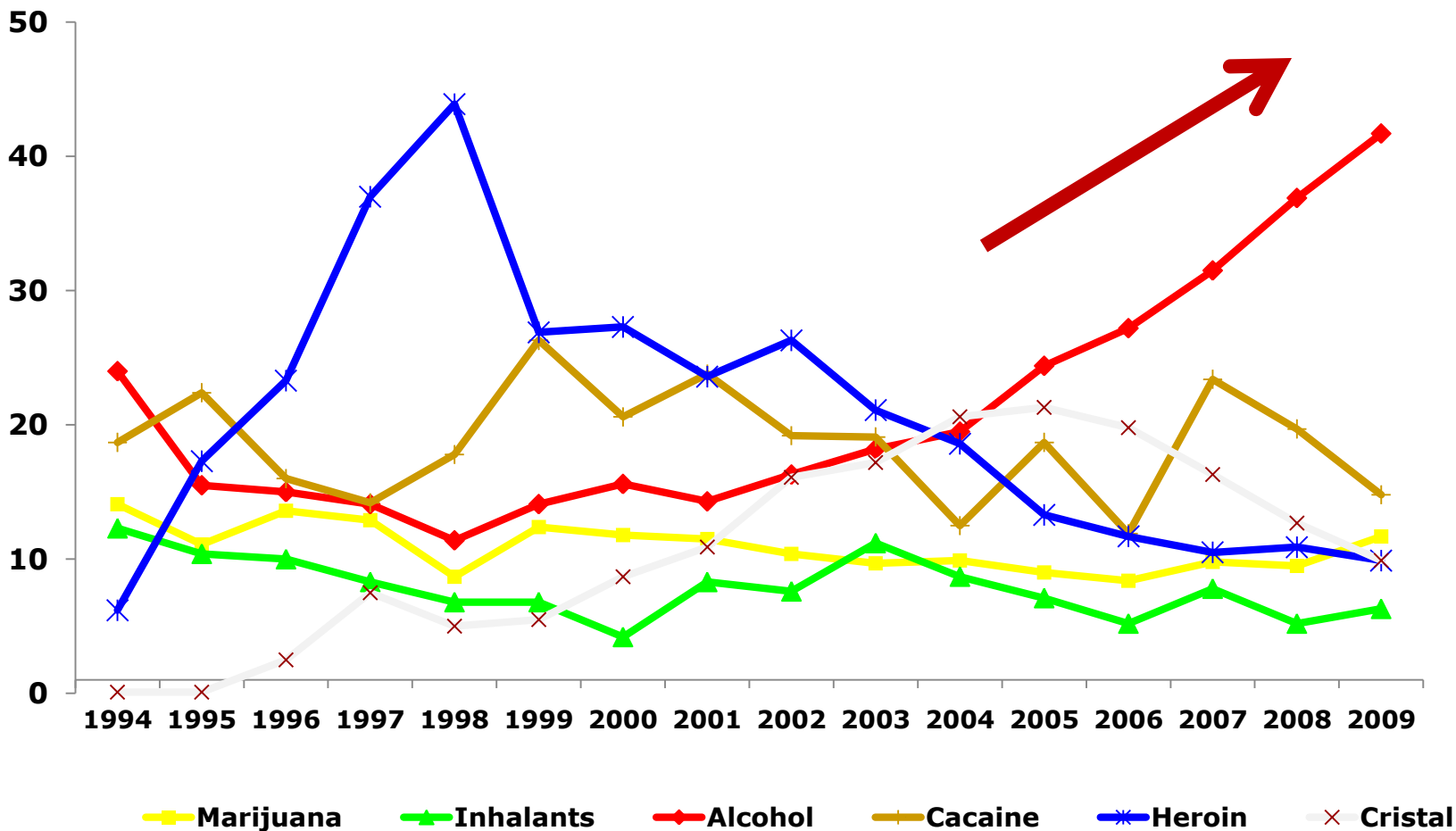
Age of onset of Alcohol consumption among students: % who started at age 12 or earlier.



Initial Drug reported by patients attending Non governmental treatment centers 1994-2009.

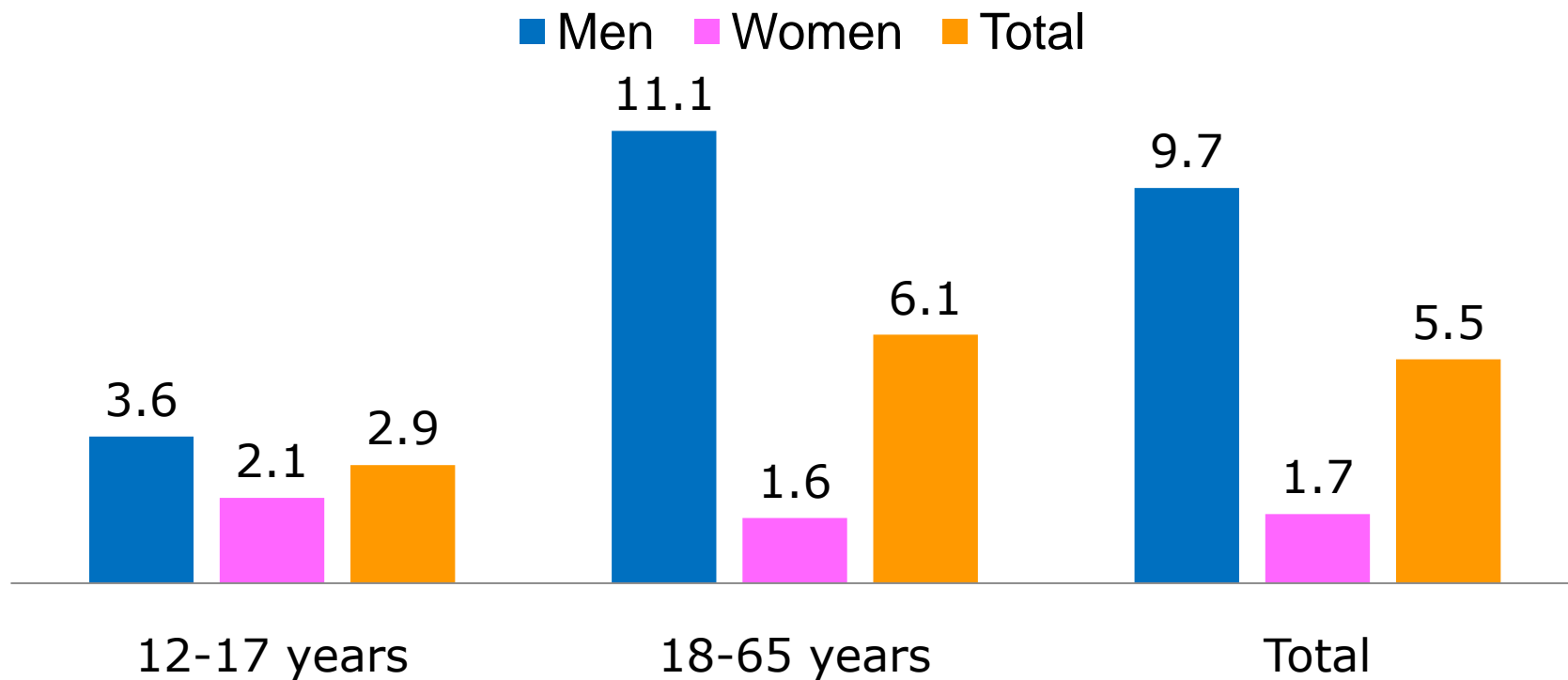


Impact drug reported by patients attending Non governmental treatment centers. 1994-2009.



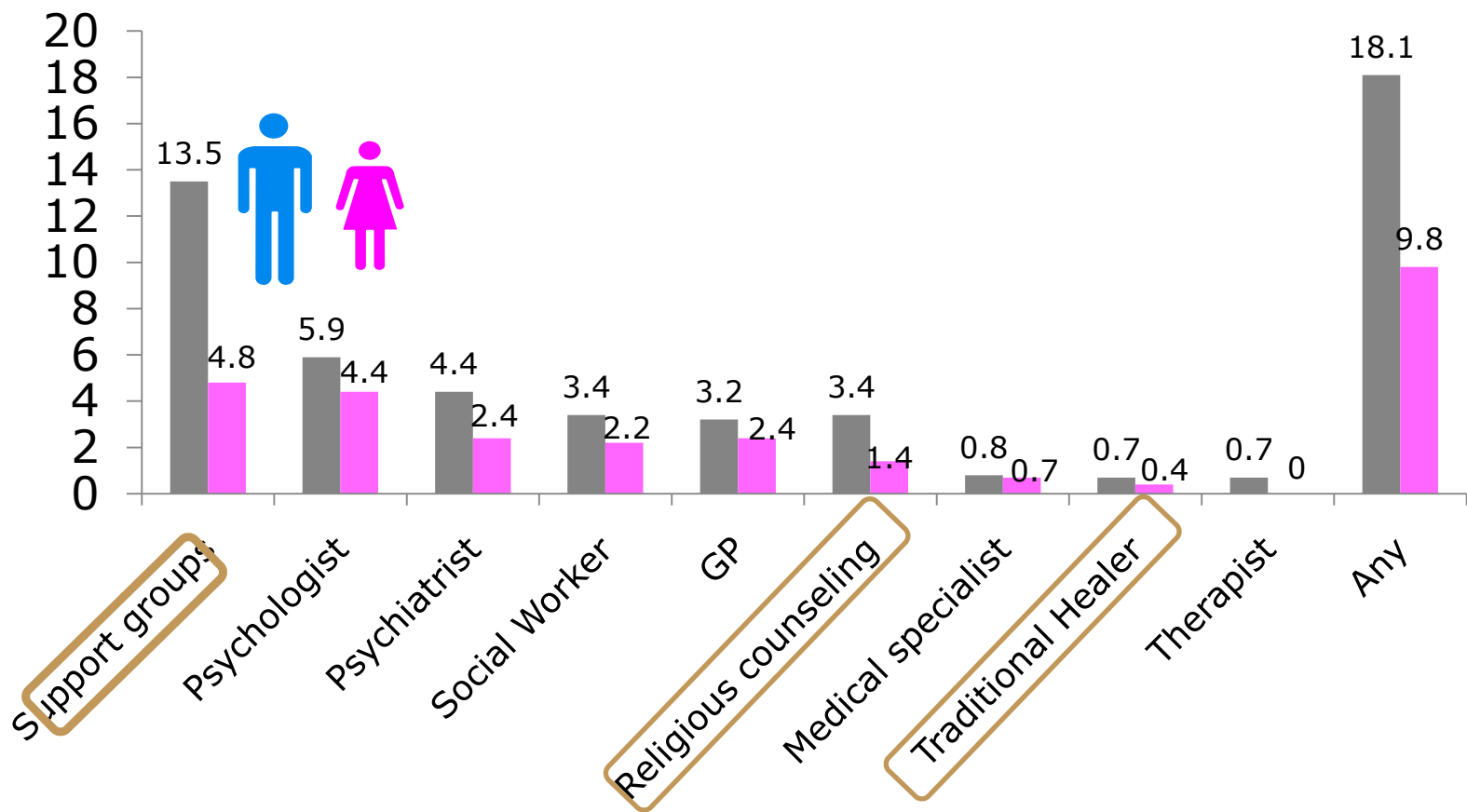
Population that meets the criteria for abuse / dependence of alcohol

5° National Addictions Survey. SS, CONADIC, INPRFM, INSP



*5.5% of the population suffers from alcohol abuse or dependence.
More female teens meet the criteria for this disorder suggesting
a more recent practice among females*

Have you ever consulted a...?



No professional Help

Proportion of male and female that received treatment for alcohol or drug use.

Treatment

- Less than 1% of people with substance abuse disorders contacted a treatment option within the year of onset (0.9%),
 - In contrast with 16% of patients with depression
- The proportion of cases that contacted a treatment option at 50 years old was just 22.1%
 - In contrast with 69.9% of patients with any affective disorder
- In adolescent population, the probability to get treatment for a substance use disorder is higher than for other mental disorders.

Borges, Medina-Mora et al., 2007

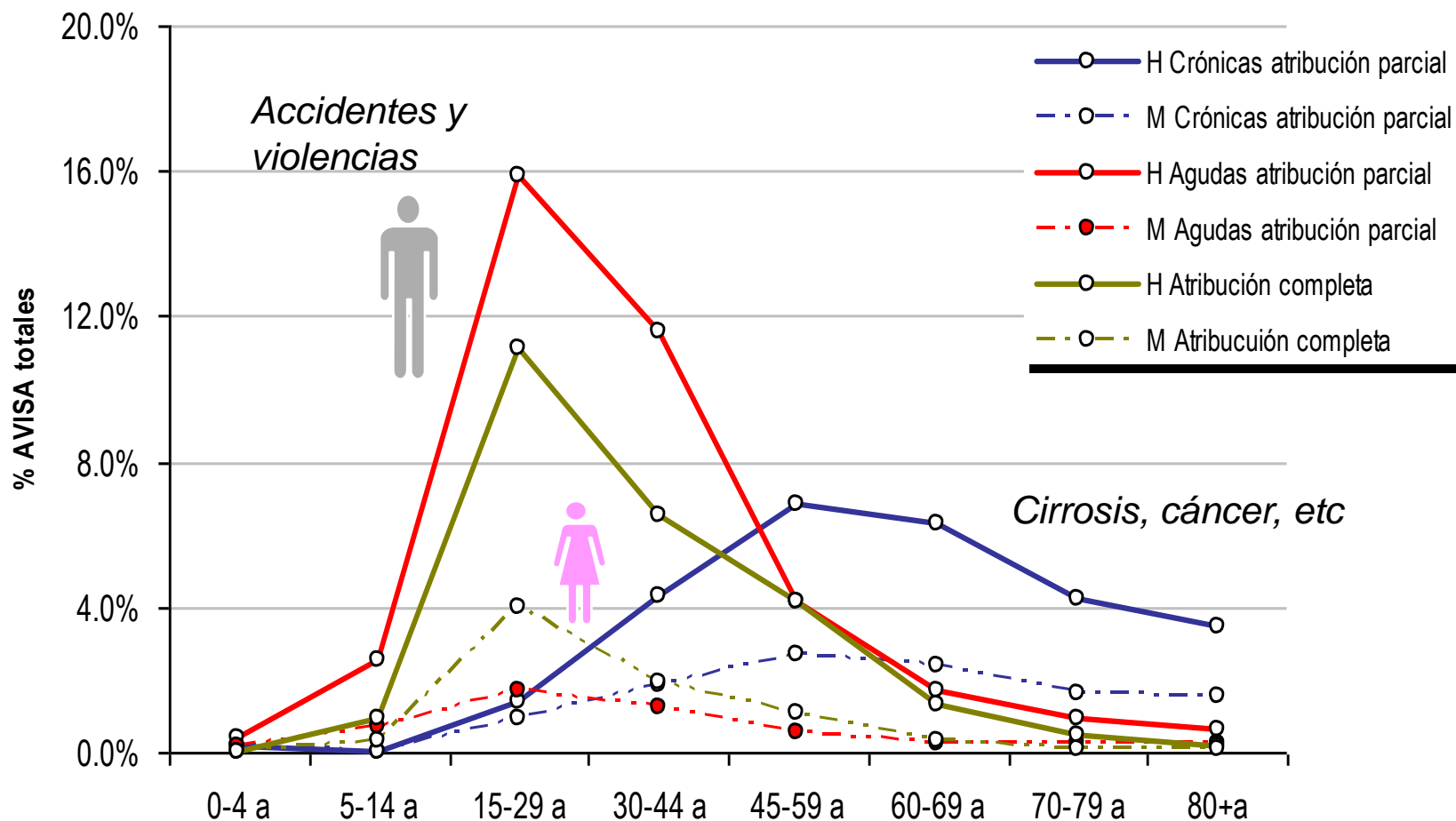
Is addiction treatment a human right?

Causes of death and disability in Mexico

Days adjusted for disease and injury 2004

MORTALIDAD		DISCAPACIDAD	
High blood glucose level	14.4%	ALCOHOL USE	7.5%
High Body Mass Index	12.4%	High Body Mass Index	5.3%
Hypertension	10.1%	High blood glucose level	5.2%
ALCOHOL USE	8.4%	Hypertension	2.4%
Tobacco use	4.8%	Unsafe sex	1.9%
Low consumption of vegetables and fruits	4.7%	Low consumption of vegetables and fruits	1.5%
Sedentary	4.4%	High cholesterol	1.2%
High cholesterol	3.6%	Sedentary	1.2%
		Tobacco use	1.5%

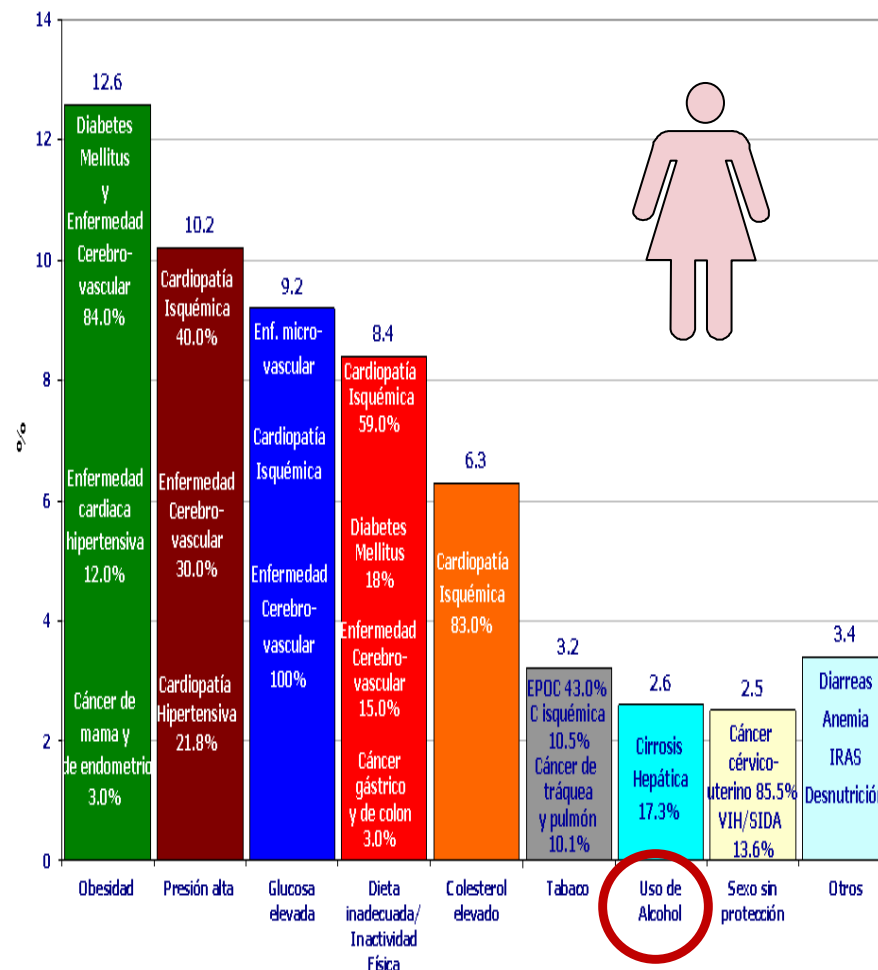
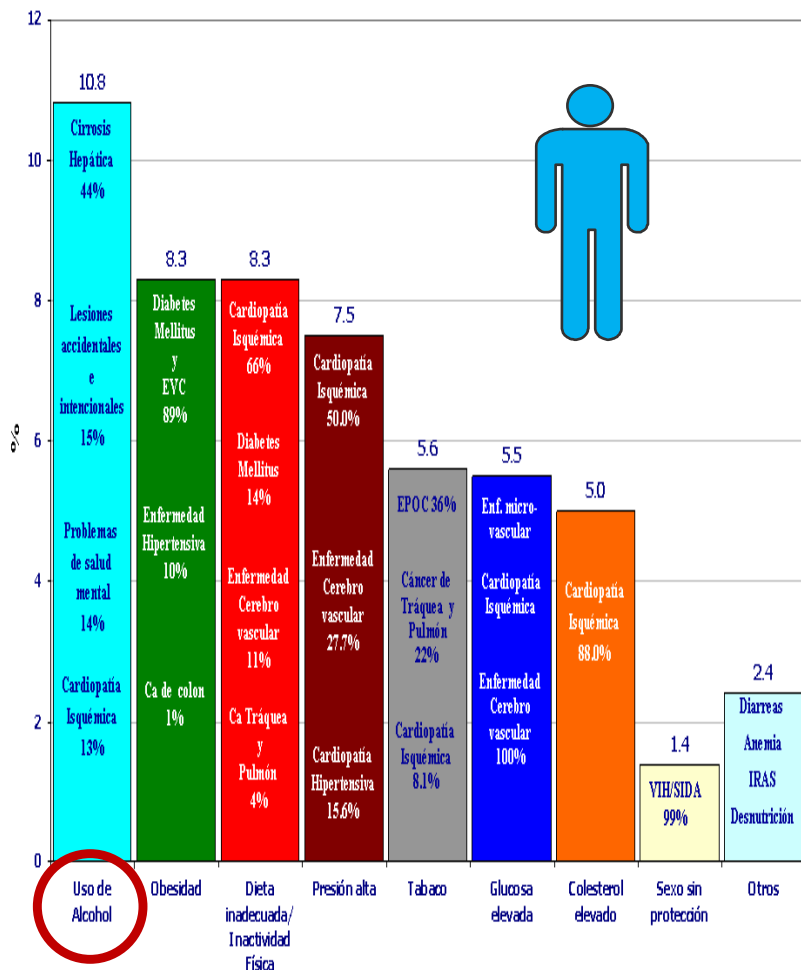
AVISA atribuibles al Consumo de Alcohol, por sexo, edad y categoría de atribución causal. Latinoamérica y el Caribe. OMS, 2002



Lozano y cols., 2009. Basado en datos de Global Burden of Disease (2002). (López, Mathers, Ezzati y cols., 2006).

Mortality from selected causes attributable to different risk factors. Gender comparison, Mexico 2005.

Alcohol as the fourth leading cause of death in the general population. First in men and the seventh in women



The endemic problem of alcohol consumption, Leading cause of disability in Mexico

TABLE 5. Alcohol-related disease burden in disability-adjusted life years lost (DALYs) (thousands) in 2000 in the Americas and the world, by disease category and region (calculated from data in reference 2)

Disease category	Americas						A, B, and D Total	DALYs ^a lost attributable to alcohol %	World		Total
	A ^b		B ^b		D ^b				F	M	
	F ^c	M ^c	F	M	F	M					
Maternal and perinatal conditions	1 ^d	1	12	15	1	1	31	0.2	55	68	123
Cancer	79	99	81	116	13	12	400	2.9	1 021	3 180	4 201
Neuropsychiatric conditions	682	2 113	792	2 979	82	305	6 953	50.1	3 814	18 090	21 904
Vascular conditions	-256	-174	162	480	16	38	266	1.9	-428	4 411	3 983
Other noncommunicable diseases	25	165	101	531	20	55	897	6.5	860	3 695	4 555
Unintentional injury	119	498	177	1 815	29	268	2 906	20.9	2 487	14 008	16 495
Intentional injury	53	222	118	1 919	9	110	2 431	17.5	1 117	5 945	7 062
All DALYs lost attributable to alcohol	702	2 925	1 443	7 854	170	789	13 883	100.0	8 926	49 397	58 323
Percentage of DALYs lost attributable to alcohol ^e	3.2	11.9	4.1	17.3	2.2	8.6	9.7		1.3	6.5	4.0

^a DALY = disability-adjusted life years.

^b WHO classification.

^c M = male, F = female.

^d Numbers are rounded to the nearest thousand. 0 indicates fewer than 500 alcohol-attributable DALYs lost in the category.

^e The percentage of DALYs lost attributable to alcohol were calculated by dividing the number of DALYs attributable to alcohol by all DALYs in the region.

TABLE 1. Classification of countries in the Americas according to childhood and adult mortality

Region A ^a	Region B	Region D
Very low childhood and very low adult mortality	Low childhood and low adult mortality	High childhood and high adult mortality
Canada, Cuba, United States of America	Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guyana, Honduras, Jamaica, Mexico, Panama, Paraguay, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela	Bolivia, Ecuador, Guatemala, Haiti, Nicaragua, Peru

^a Regional subgroups defined by the World Health Organization (9) on the basis of high, medium or low levels of adult and of infant mortality.

Alcohol consumption and burden of disease in the Americas: implications for alcohol policy

Jürgen Rehm¹ and Maristela Monteiro²

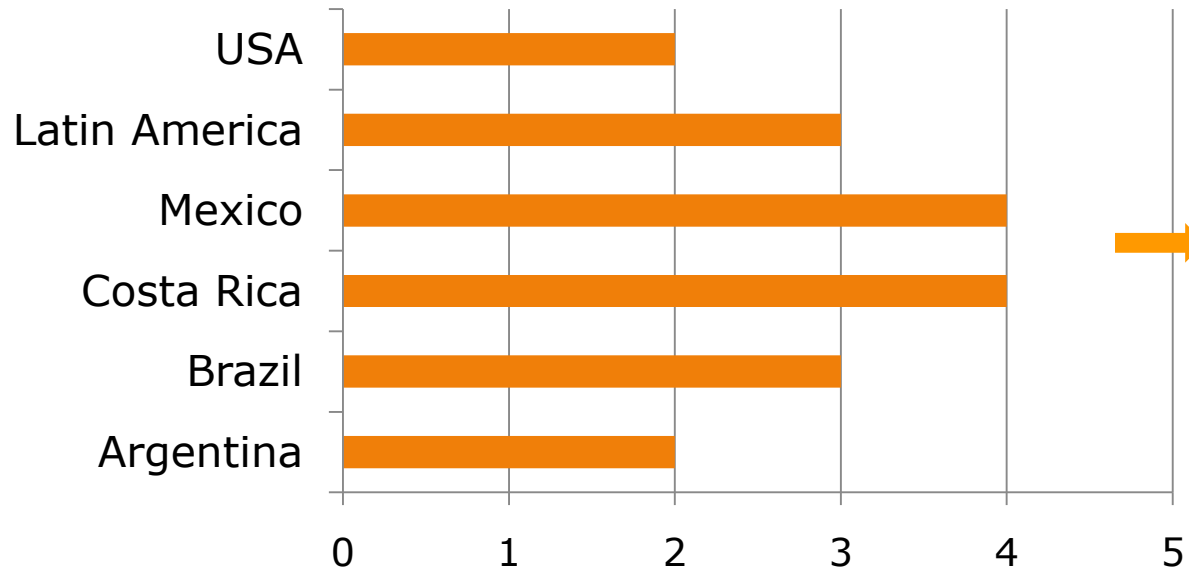
Suggested citation Rehm J, Monteiro M. Alcohol consumption and burden of disease in the Americas: implications for alcohol policy. *Rev Panam Salud Publica*. 2005;18(4/5):241-8.

Dato México:

Eduardo González-Pier et al. Priority setting for health interventions in Mexico's System of Social Protection in Health *Lancet* 388, 2006

Why do we have so many alcohol related problems?

Dangerous use index



The consumption pattern of Mexico qualifies for the highest level of risk

Dangerous use (measured by : The proportion of the population consuming alcoholic beverages + abstainers. When there is a high proportion of abstainers as in the case of Mexico, available alcohol is concentrated in a lower rate of people)

- **Drinking patterns**

Consumption of large amounts of alcohol per drinking occasion vs.. small amounts more often.

No food consumed

Consumed outside the home

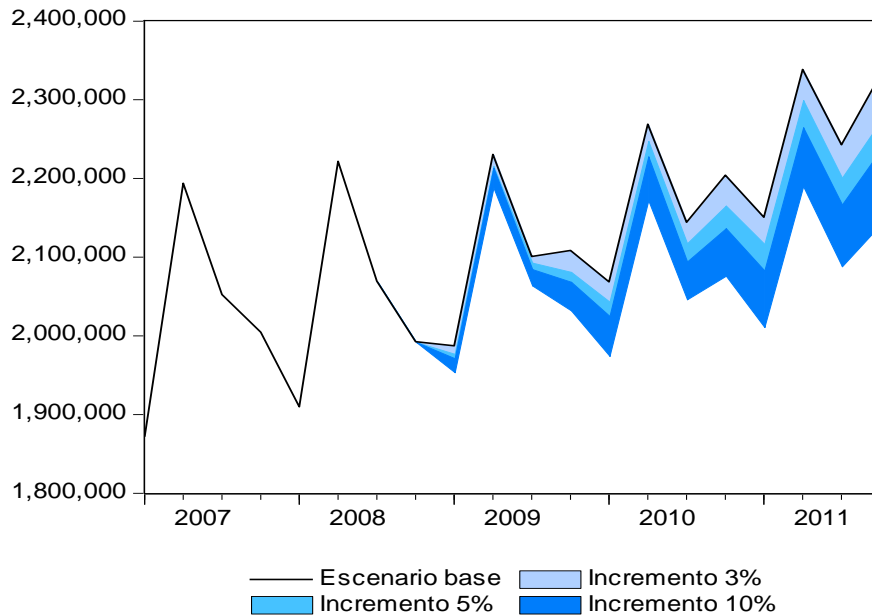
Public policies for prevention and treatment of harmful use of alcohol.

- ❖ Price and tax policy
- ❖ Regulating the physical availability of alcohol
- ❖ Changing consumption stage
- ❖ Measures to limit the car driving under the influence of alcohol
- ❖ Regulation of the promotion of consumption
- ❖ Education and persuasion strategies
- ❖ Brief interventions and treatment

Income-Price elasticity's and cross elasticity's

Empirical evidence for the case of Mexico

Scenarios of beer consumption 2009-2011 (thousands of liters)



It requires a price increase at least 10% (above inflation) for the changing pattern of consumption

High income elasticity.
Negative price elasticity but inelastic.

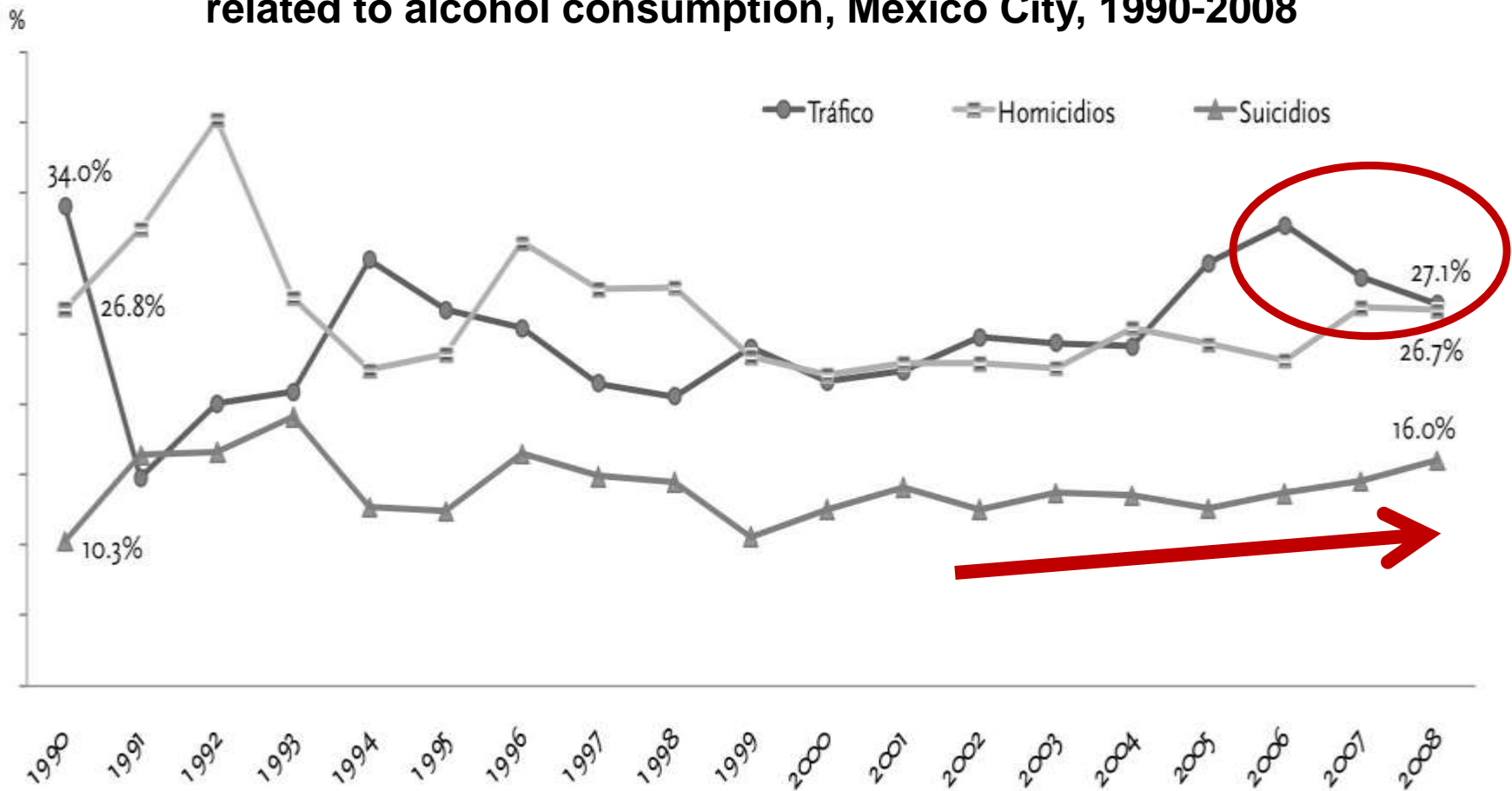
Cross elasticities in Mexico

Y	Pr Cerveza	Pr Tequila	Pr Ron	Pr Brandy	Pr Refresco
0.724	-0.545	0.145			
0.618	-0.433		0.353		
0.787	-0.227			0.216	
0.473	-0.788				0.962

Markets are interconnected: cross-price elasticity's

Are there effective public policies to control alcohol use consequences in Mexico? The Case of the breathalyzer

Violent deaths, a trend in the proportion of cases related to alcohol consumption, Mexico City, 1990-2008



Fuente: Servicio Médico Forense (SEMEFO) del Distrito Federal.

YOUTH ALCOHOL AVAILABILITY

Alcohol consumption is complex and environmental factors are relevant.

Academic context survey:
Sale/consumption points near **33** high school facilities (*availability*)

Youth response to questionnaire:
11,000 students.
Ethnographic observation

Detected Alcohol sale/consumption points: 337

	Bachelor	High School
Alcohol sale	102	78
Alcohol sale/consumption	93	57
Alcohol consumption	48	19

Distance: < 500 mts.

**Top day activity:
morning/afternoon**

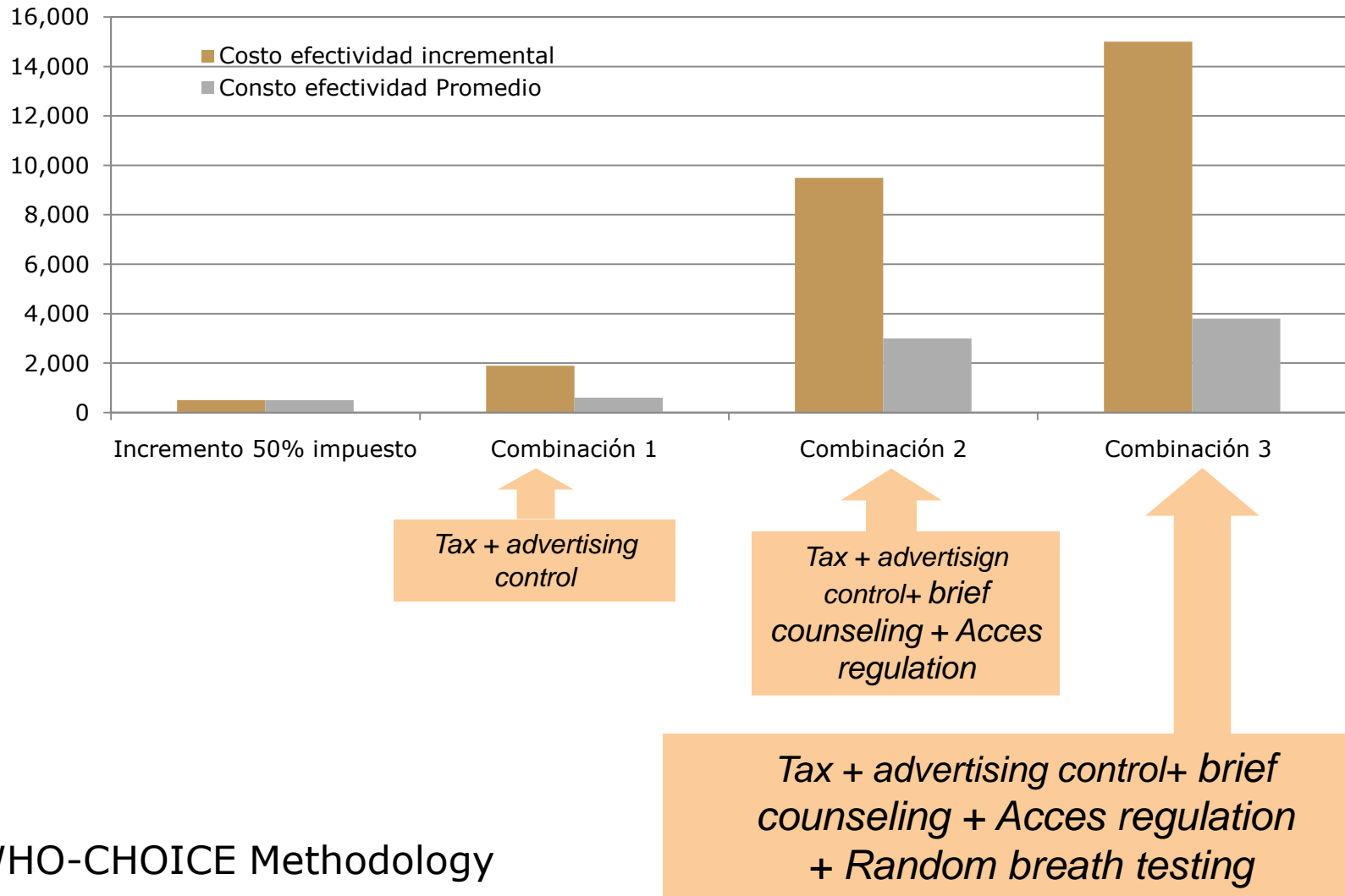
Poor or absent security, no food sale.

Top alcohol sale presentation: One liter beer.
26 al 62% of alcohol sale
Mean cost range: 18.43 a 22.44 pesos (1.4 – 2.0 USD)

Youth response to alcohol availability:

- * 46% attend near school points where drinking is possible.
- * If those points were not available, 53% declared that they would avoid drinking.

Cost-Effective comparisons between **isolated or integrated interventions** to prevent alcohol abuse in **Mexico**.



WHO-CHOICE Methodology

- ✓ The independent measure more cost effective to prevent DALYs due to alcohol tax was increased (50%).
 - ✓ All avoid tax increases on their own (with or without adjustment for age and off) over 150,000 DALYs per year. The increase of 50% exceeds 300,000 (without adjustment or discount).
 - ✓ No other interventions (with adjustment and off) reaches 50,000.
 - ✓ Moreover, the tax increases are always more economical than other interventions.
 - ✓ The tax increase to 50%, requiring an investment of \$ 567, and brief advice in primary care, involves an expenditure of \$ 14.342.
- ✓ The best strategy was comprehensive combination of the following measures:
 - ✓ tax increase,
 - ✓ higher proportion of people served with brief interventions,
 - ✓ control of advertising, and
 - ✓ Access reduction
 - ✓ Random breath testing

Main results



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*"The **impact** of alcohol is **high but preventable**.
You need to use all the **information** already accumulated
for **decision-making**, which enables
a **better balance** between purely **commercial interests**
and short-term profitability
with the interests of public **health** and
long-term benefits for society. "*

Mirta Roses

Preface: Alcohol in developing countries, 2012



We have the evidence,
we must act



**Information center on
Mental Health and
Addiction**

cisma@imp.edu.mx
www.inprfm.org.mx

Survey Unity

<http://www.uade.inpsiquiatria.edu.mx/>

Thanks for your attention



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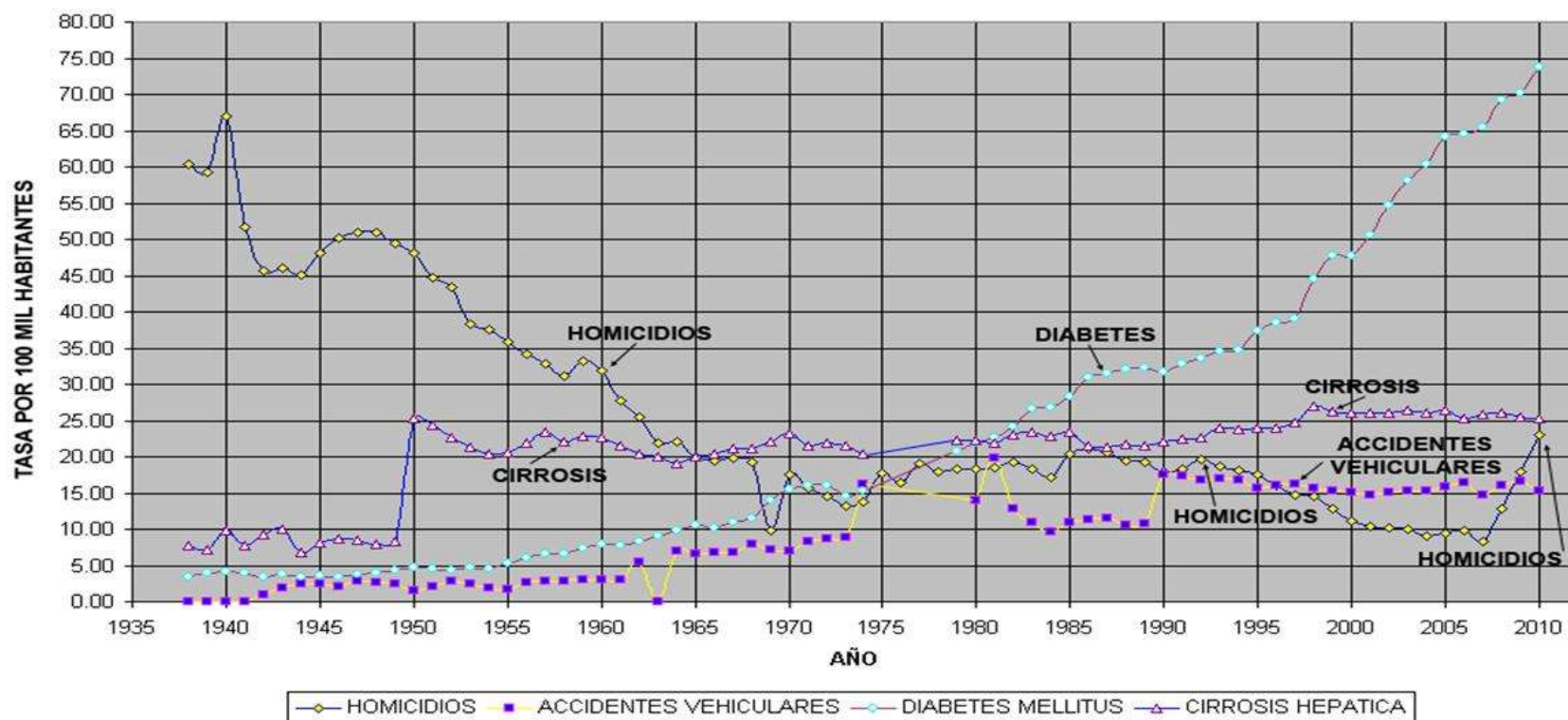
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Cirrhosis, murders and traffic accidents within the 10 leading causes of death in Mexico in 2010.

In 2010 Cirrhosis remains the fourth leading cause of death in Mexico (compared to 18th place in the world); homicides increased 30% annually (4.35% of total mortality); and traffic accidents are the ninth leading cause of death.

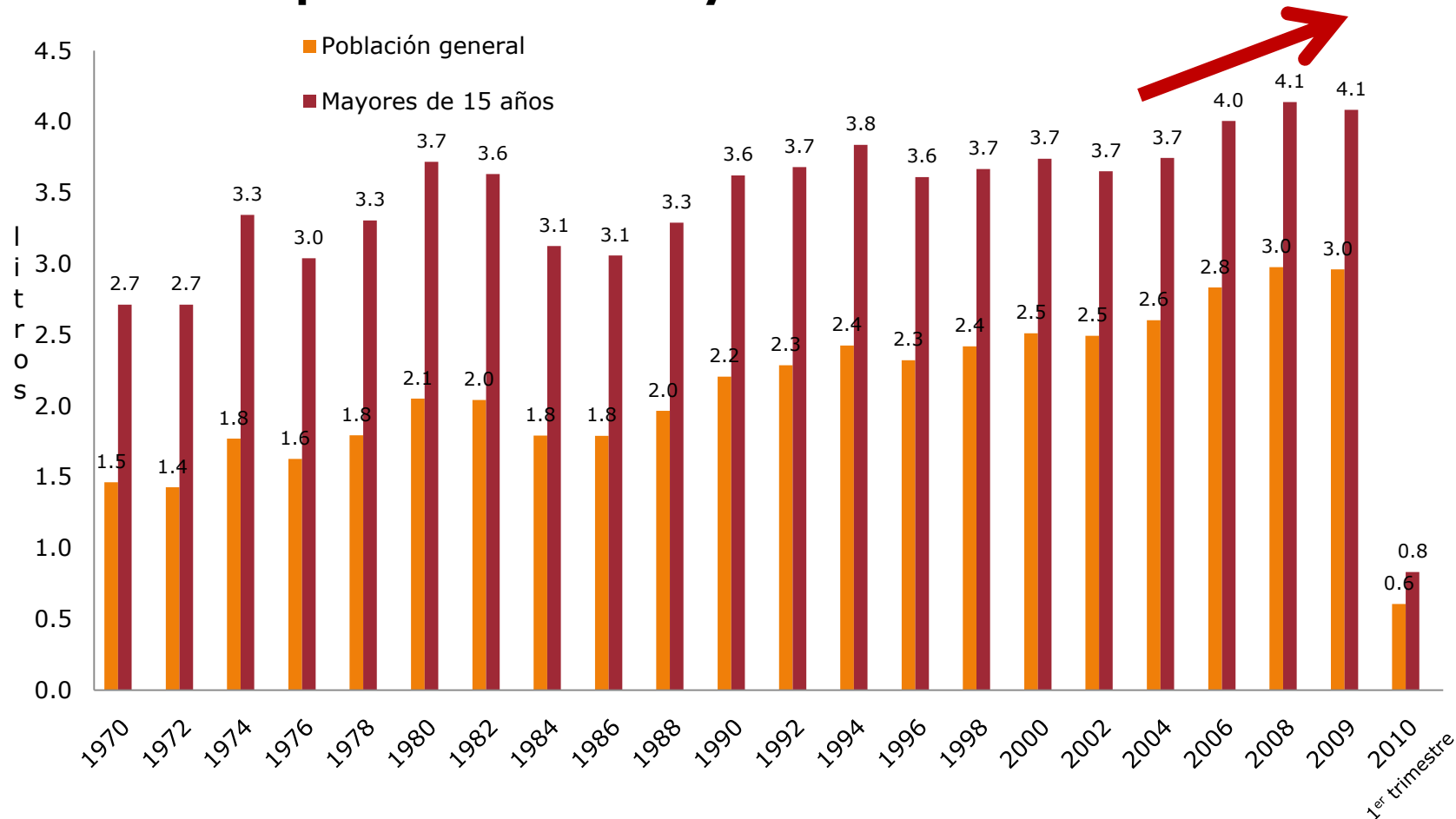
ALGUNAS CAUSAS DE MORTALIDAD EN MEXICO, 1938-2010, TASAS POR 100 MIL HABITANTES



MEXICO, Leading causes of death since 1938
 Compilation: Aguirre (2012), data from INEGI, OMS y SINAIS

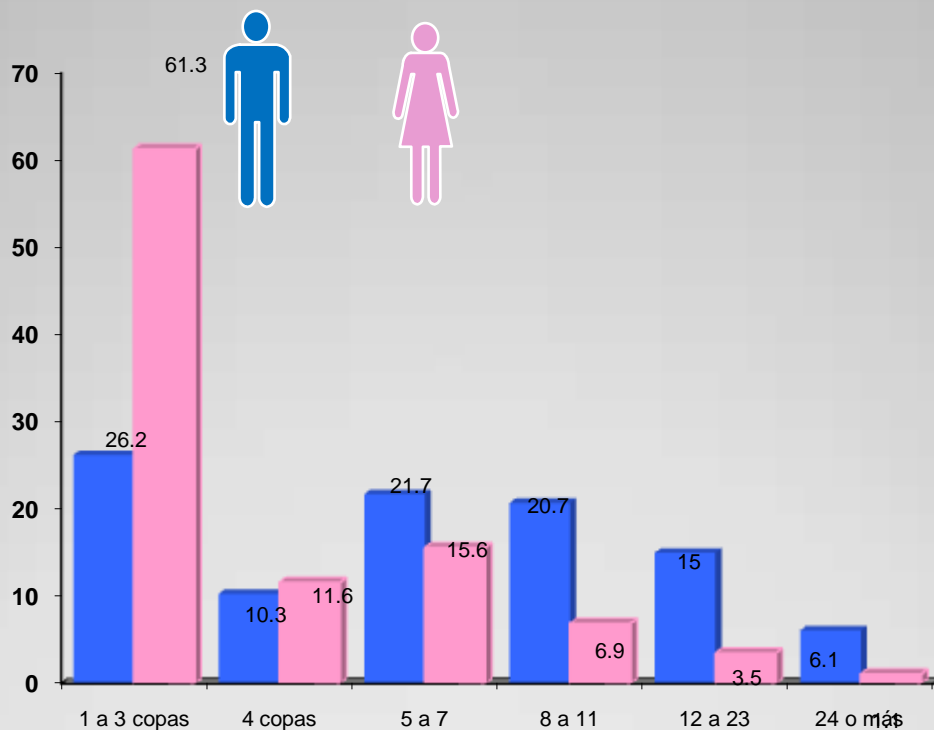
International data:
 Global Burden of Disease: Update 2004.
 World Health Organization, 2009.

Ethanol per capita intake (in liters) in México: Population from 15 years or more 1970-2007



Sources: Alcohol Industry, 1970-1995.
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 ** Monthly financial reports of the Industry from the Mexican Stock Market, 2003-2007
 CONAPO/SSA. Estimates based on Mexican population projections, 1970-2030. CONAPO, 2006.

Frequency and Amount of Alcohol Intake. Population between 12 and 65 years old. National Addiction Survey, 2008



Number of drinks in a single day

High intake:

63% male consumers 5 drinks or more per event
39% female consumers 4 drinks or more per event.

Most persons with no care

13.4 million people drink with risk levels
4.8 start having problems with his handling of alcohol
4.2 million people require specialized help

Few receive guidance

We can learn to drink in less risk limits

When no dependence has developed the problem is reversible.

Brief interventions are cost effective.

Should be promoted that educational institutions and health include brief counseling and treatment

If you have a problem:
The new life centers, ICIJ and support groups

Abuse consequences



Intake /ocational

Acute use

Accidents

Violence

Unsafe sex

Intoxication

Chronic use

Alcoholism

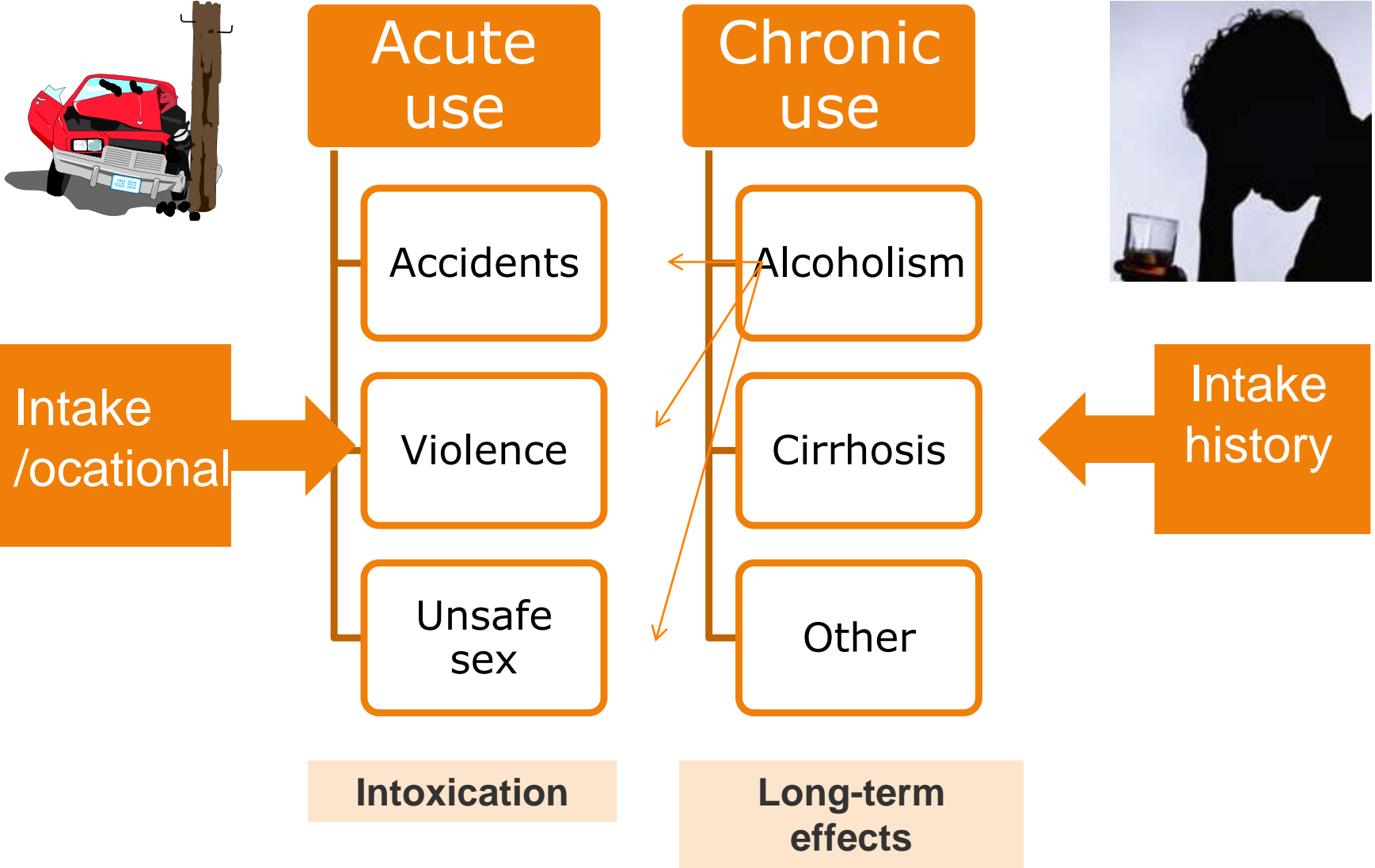
Cirrhosis

Other

Long-term effects



Intake history



Issues involved a tax and price alcohol increase policy

Formal Alcohol

Legal and regulated beverages allowed to be marketed.

- Elaborated under strict quality control and complying with applicable legal norms.
- They pay taxes.
- Health damages are minimized and recommendations for moderation and consequences must be monitored.

Informal Alcohol

Two types of no legal beverages:

- 1) Beverages "parallel" not paying taxes when entering the country.
- 2) Drinks of illicit origin
 - Imitation of the original or "pirates"
 - Adulteration original drinks or "recessed".
- It is not known whom and with what is produced and its intake can cause significant damage to health.

Panel IV: Informal alcohol.

Unregulated market of alcohol beverages in Mexico, 2008 TOTAL and BY BEVERAGE TYPE

Model estimates, thousands of liters of pure alcohol				
Beverage	ANC Total Option 1 (Beer)	ANC Total Option 2 (Beer and coolers)	ANC Total Option 3 (Beer, Coolers and wine)	Illegal Aparent National Consumption
Alcohol	15,057	14,748	13,063	
Spirits	85,412	76,977	68,971	57,069
Beer	282,686	282,686	282,686	282,686
Pulque	14,496	15,783	13,271	12,826
Coolers	31,256	13,150	13,150	1,968
Wine	14,636	11,746	7,383	5,095
Total	443,543	415,090	398,524	359,644

Market structure of unregulated alcohol: Alcohol 24% pure or brandy; Spirits 34%; Pulque 3%; Coolers 29% and 10% wine.