The impact of alcohol consumption in Europe. Implications for policy.

J. Rehm & K.D. Shield

Social and Epidemiological Research (SER) Department, Centre for Addiction and Mental Health, Toronto, Canada

Dalla Lana School of Public Health, University of Toronto (UofT), Canada

Dept. of Psychiatry, Faculty of Medicine, UofT, Canada

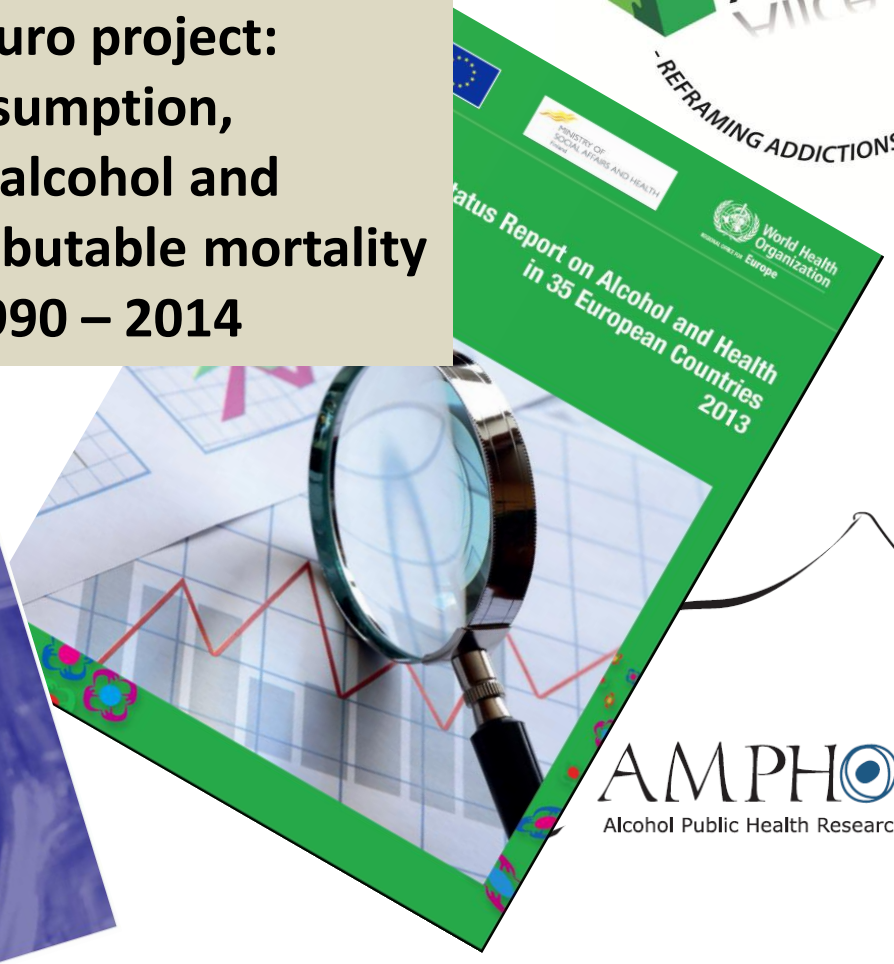
PAHO/WHO Collaborating Centre for Mental Health & Addiction

Epidemiological Research Unit, Technische Universität Dresden, Klinische Psychologie & Psychotherapie, Dresden, Germany

IARC, Lyon, France

Basis

Many past publications, and a new WHO Euro project: Alcohol consumption, unrecorded alcohol and alcohol-attributable mortality in Europe 1990 – 2014



ADDICTIONS AND LIFESTYLES IN CONTEMPORARY EUROPE
Alice Rap
- REFRAMING ADDICTIONS PROJECT -

AMPHORA
Alcohol Public Health Research Alliance

Alcohol consumption, unrecorded alcohol and alcohol-attributable mortality in Europe 1990 – 2014 (ISS in steering!)

The objectives of the project:

- To describe the trends in alcohol consumption and attributable mortality for the time period 1990 – 2014 for WHO European region;
- To describe regional- and country level trends;
- To help establish a monitoring system for WHO European region and for countries;
- To deliver an evidence base for policy

Do we really need substance use policies such as alcohol policy?

- Would the world not look the same with or without alcohol policies?
- Shock for US: in the first decade of the 21st century, the life expectancy of middle-age white Non-Hispanic adults decreased!
- Why? Since 1900 a decrease in life expectancy in the US for Whites only happened in World Wars (WW) I and II and the 1918-19 Influenza Pandemic (which killed more people than WW I).

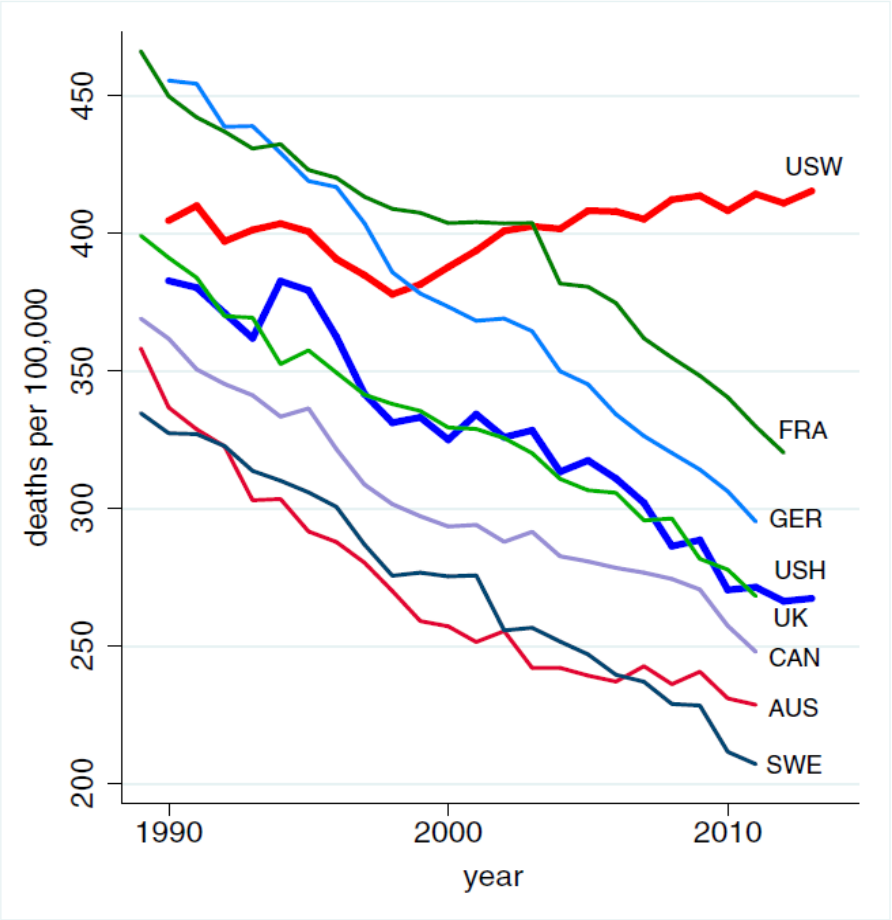


Fig. 1. All-cause mortality, ages 45–54 for US White non-Hispanics (USW), US Hispanics (USH), and six comparison countries: France (FRA), Germany (GER), the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE).

Case & Deaton, 2015 (including Figure 1); Rehm et al., 2016

Causes of death responsible

Yes, we do need substance use policies, as without them life expectancies and other main indicators can easily go wrong!!

Poisoning

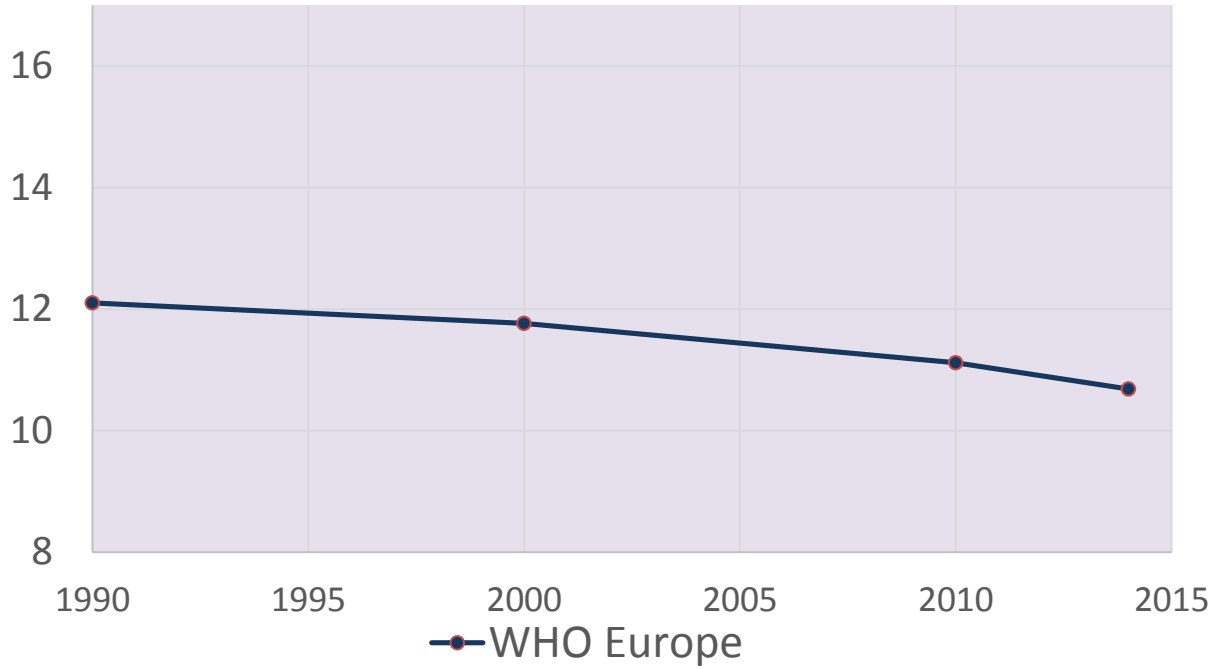
- Opioid p.(overdose deaths; POs and heroin)
- Alcohol p.
- Other pharmaceutical p.

Suicide

- Alcohol
- Illegal drugs

Liver cirrhosis

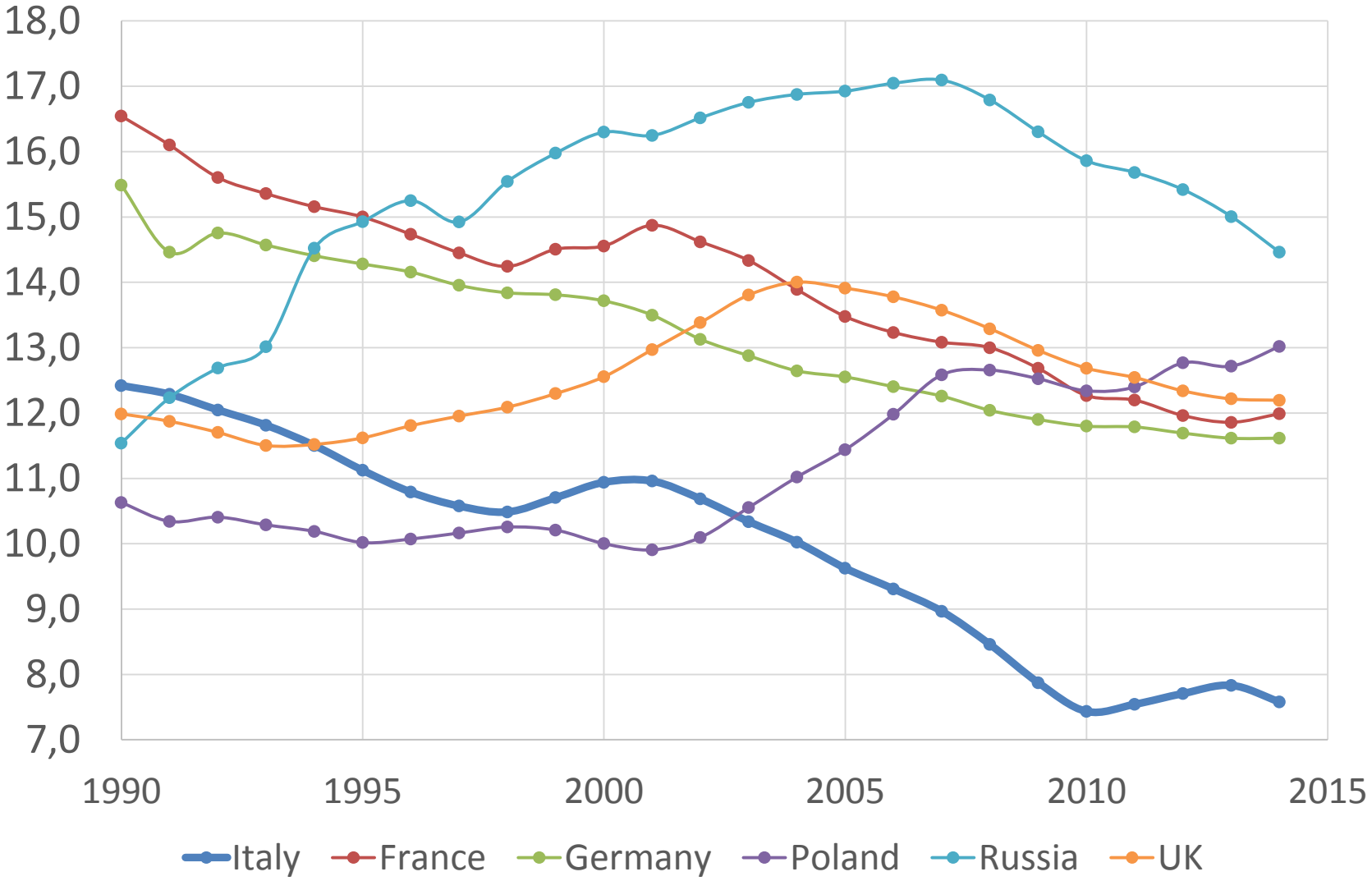
- In Europe 75-80% alcohol -attributable
- Illegal drugs -> HCV



Alcohol consumption has been going down in Europe over the past years, but there are differences between countries

ALCOHOL EXPOSURE IN EUROPE

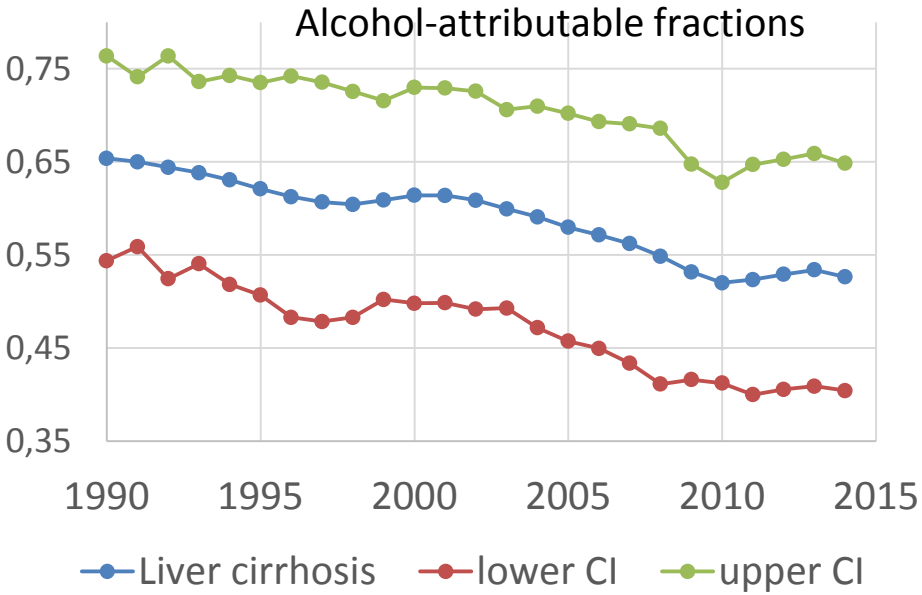
Recorded and unrecorded adult *per capita* consumption since 1990 in selected countries



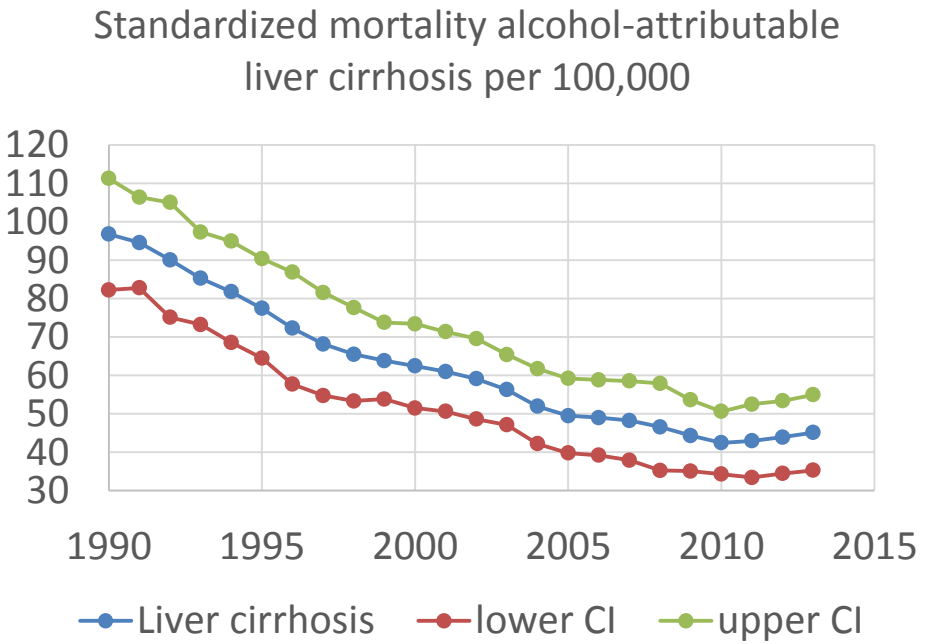
What does this mean for alcohol-attributable burden. The example of Italy and burden for EU as a whole

BURDEN

Fractions and standardized rates for alcohol-attributable liver cirrhosis for Italy

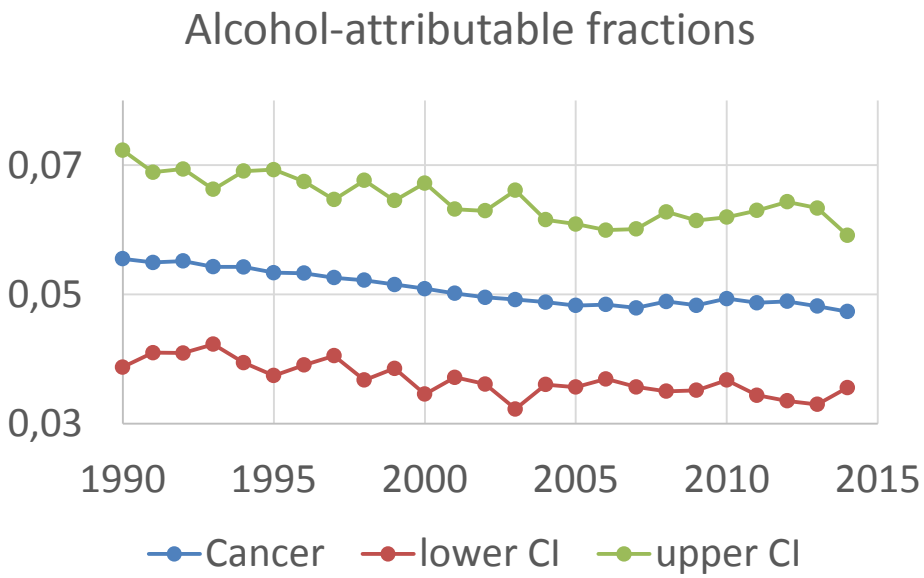


Alcohol-attributable fractions for liver cirrhosis went down, but standardized mortality for alcohol-attributable lc mortality went down even more as there is an overall effect of decreasing lc mortality independent of alcohol

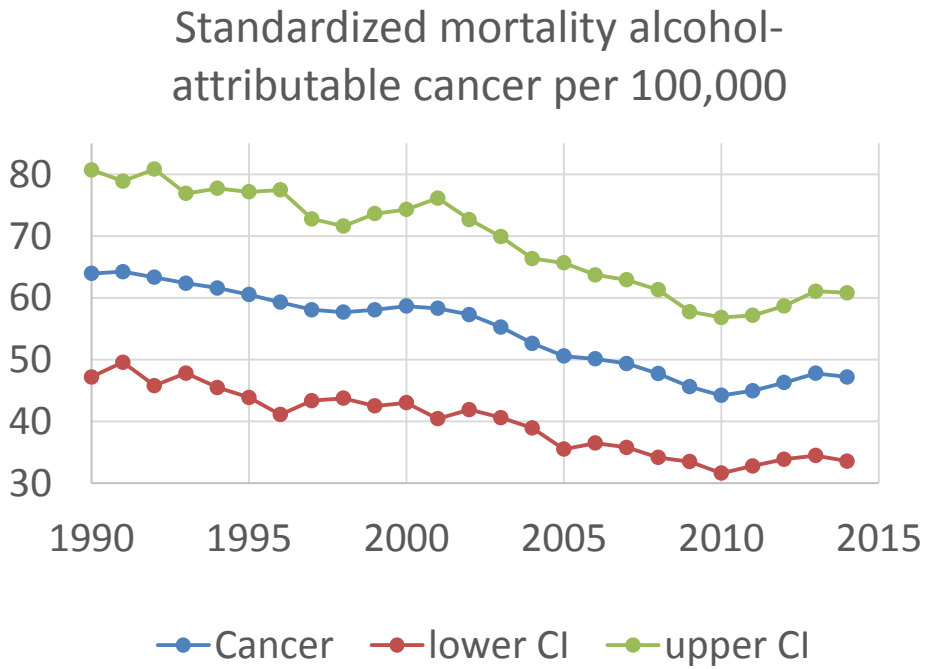


Exposure data from ISS!

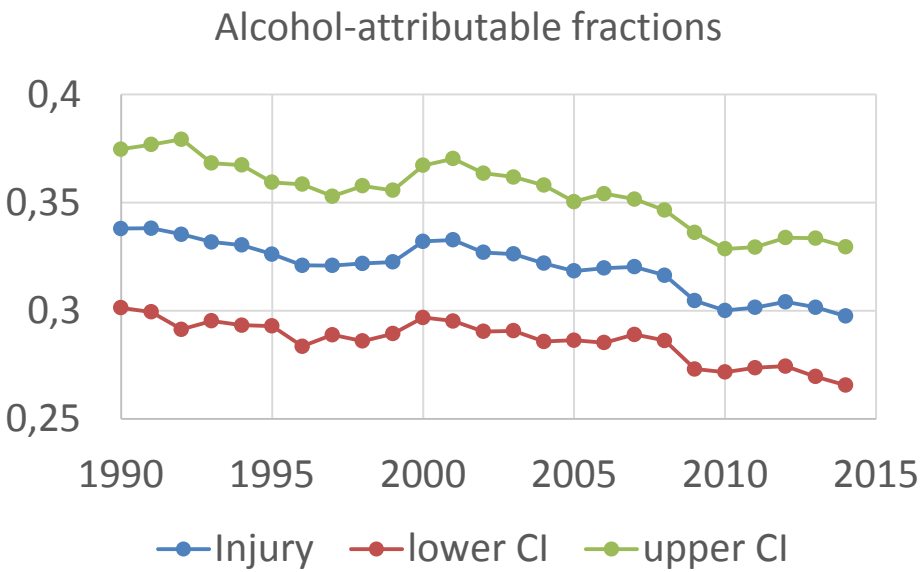
Fractions and standardized rates for alcohol-attributable cancer for Italy



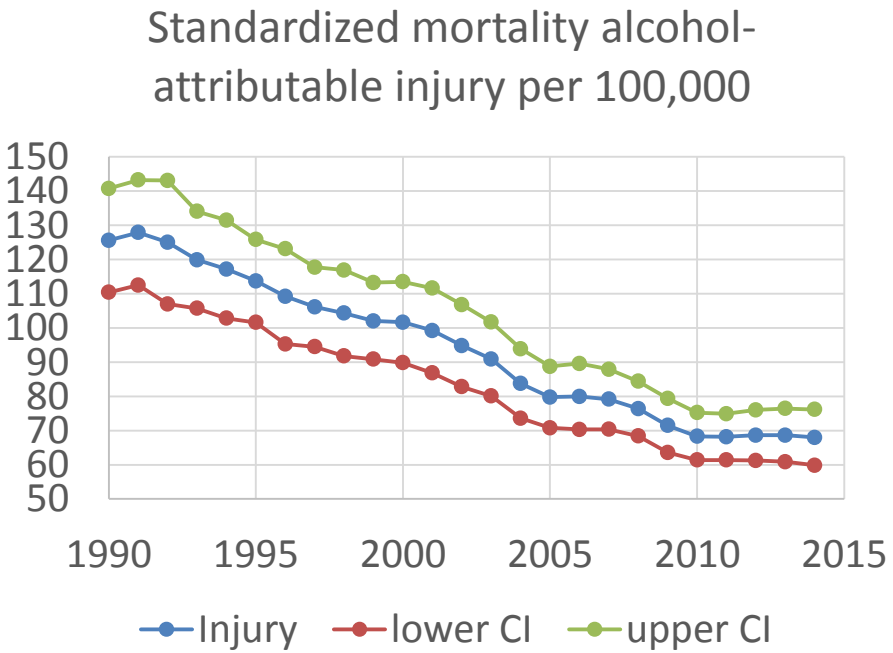
Alcohol-attributable fractions for cancer went down, but standardized mortality for alcohol-attributable cancer mortality went down even more as there is an overall effect of decreasing cancer mortality independent of alcohol



Fractions and standardized rates for alcohol-attributable injury for Italy



Alcohol-attributable fractions for injury went down, but standardized mortality for alcohol-attributable injury mortality went down even steeper as there is an overall effect of decreasing injury mortality independent of alcohol



Conclusions on alcohol-attributable burden for Italy

- Alcohol-attributable burden moves relatively synchronic with adult *per capita* consumption
- Additionally, it needs to be assured, that pattern of drinking, especially irregular heavy drinking occasions need to be controlled
- The change in drinking in Italy had pronounced effects on all mortality categories.
- Drinking should be further reduced, including heavy drinking occasions, or alcohol-attributable mortality will go up again. Especially, the gains with injury are at risk, if heavy drinking occasions are not stable!

… and burden for Europe (own calculations based on IHME)

Sex	Deaths (1,000s)	Deaths per 100,000 people	% of all Deaths	YLLs (1,000s)	YLLs per 100,000 people	% of all YLLs	DALYs (1000s)	DALYs per 100,000 people	% of all DALYs
Men	173.4	69.4	6.7%	4558.7	1826.1	10.4%	5981.4	2396.0	7.9%
Women	84.5	32.3	3.2%	1584.0	605.8	5.1%	2019.8	772.5	2.9%
Total	257.9	50.4	5.0%	6142.8	1201.9	**8.2%**	8001.2	1565.5	5.5%

High YLL, as alcohol-attributable deaths occur early in life

And the burden in some other countries over time

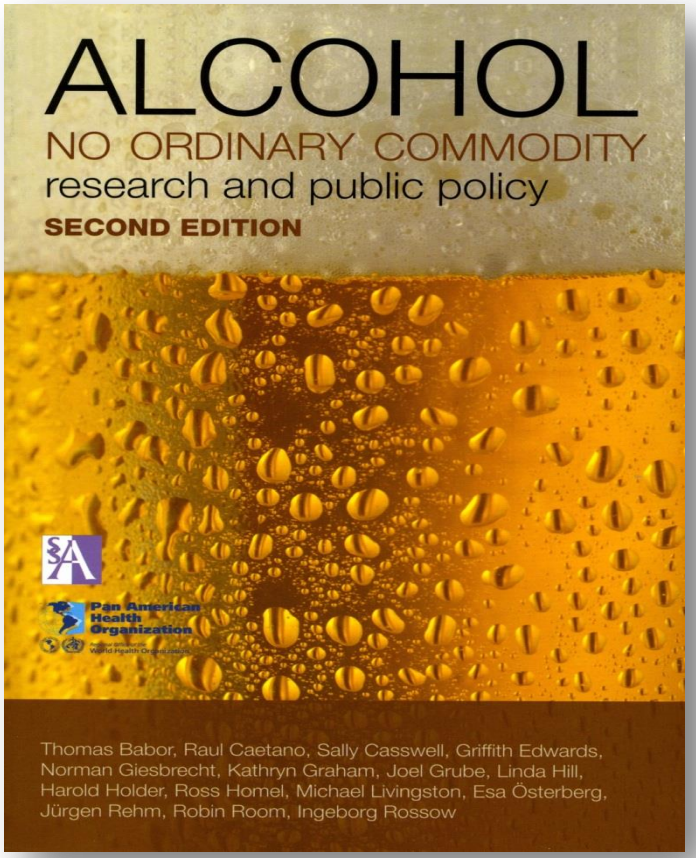
- Germany and Switzerland also had reductions in alcohol-attributable mortality (Kraus et al., 2015; Marmet et al., 2014, 2016)
- But the hospitalizations caused by alcohol went up (i.e., effect of prolonging life!)
- Similar trends in Australia (Ogeil et al., 2016)
- And alcohol-attributable deaths seem to more stable than other deaths….

Conclusions for European Union

- Divergent trends in alcohol consumption in Europe: some good signs, and some bad signs
- Overall Europe is still the region with the highest alcohol consumption in the world (Eastern Europe higher than EU).
- So overall, harm is still high **(more than every 10th death before age 65 in EU is due to alcohol!)** and can and should be reduced.
- Harm is not restricted to health or to the drinker

Need for interventions

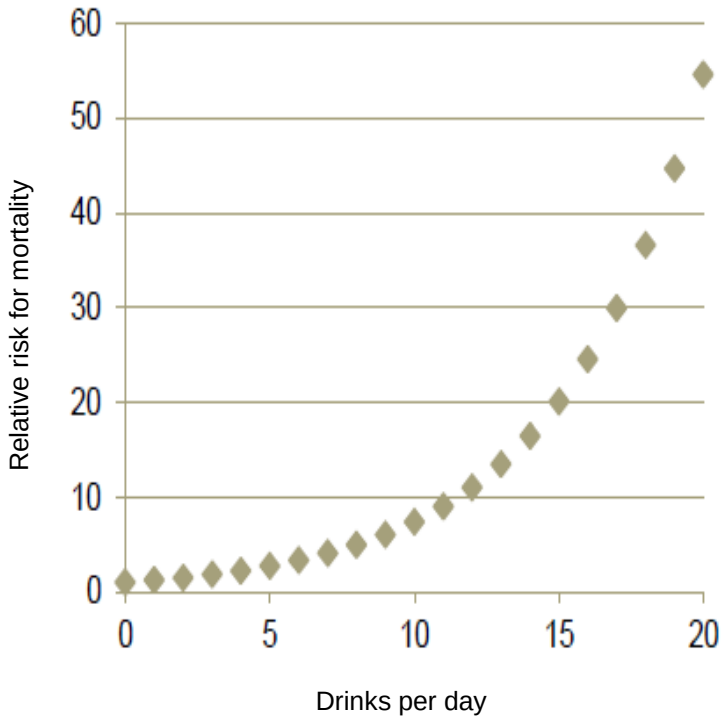
- Prevention is important (and Italy knows best) to keep reducing harm
- WHO “best buys” for cost-effective prevention ->
  - Taxation
  - Reduction of availability
  - Marketing ban
- Let us not forget interventions for heavy drinking including treatment



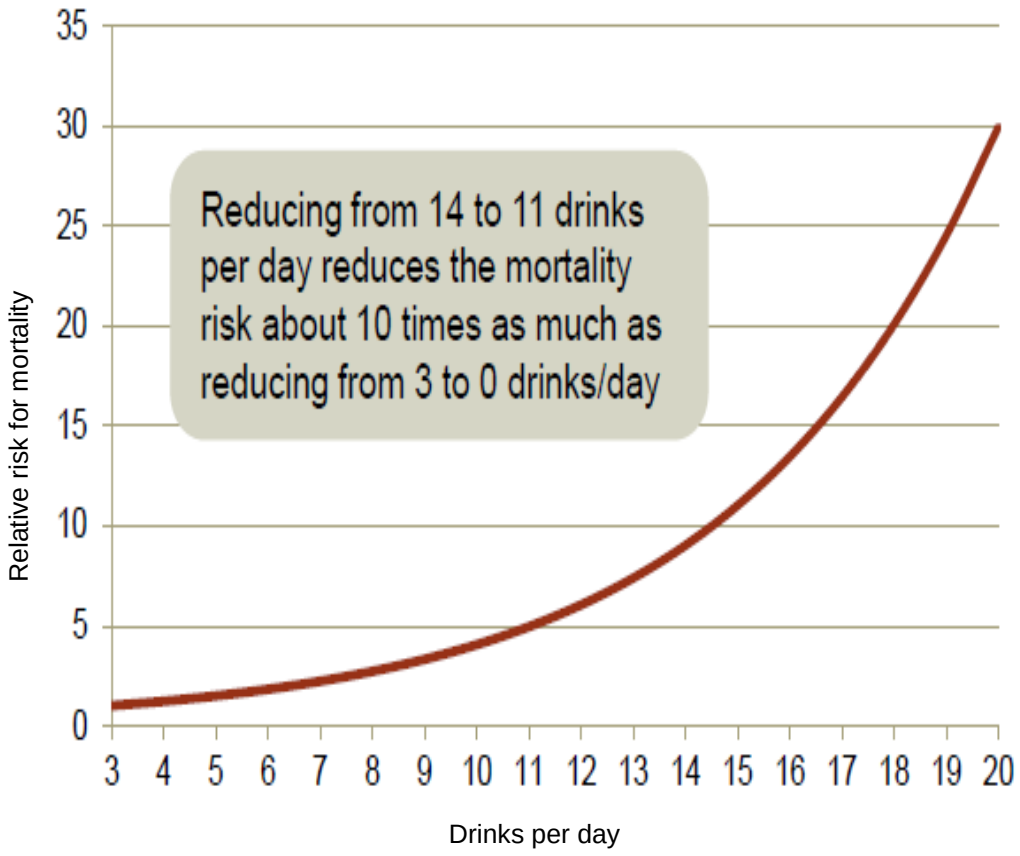
What should interventions take into account?

- It is important to reduce the highest levels of drinking in order to prevent harm

Typical risk curve for alcohol (e.g., liver cirrhosis mortality)



Relative gain in risk for mortality of reducing by three drinks/day for different levels of drinking



Roerecke & Rehm, 2013 Alc.Alc