

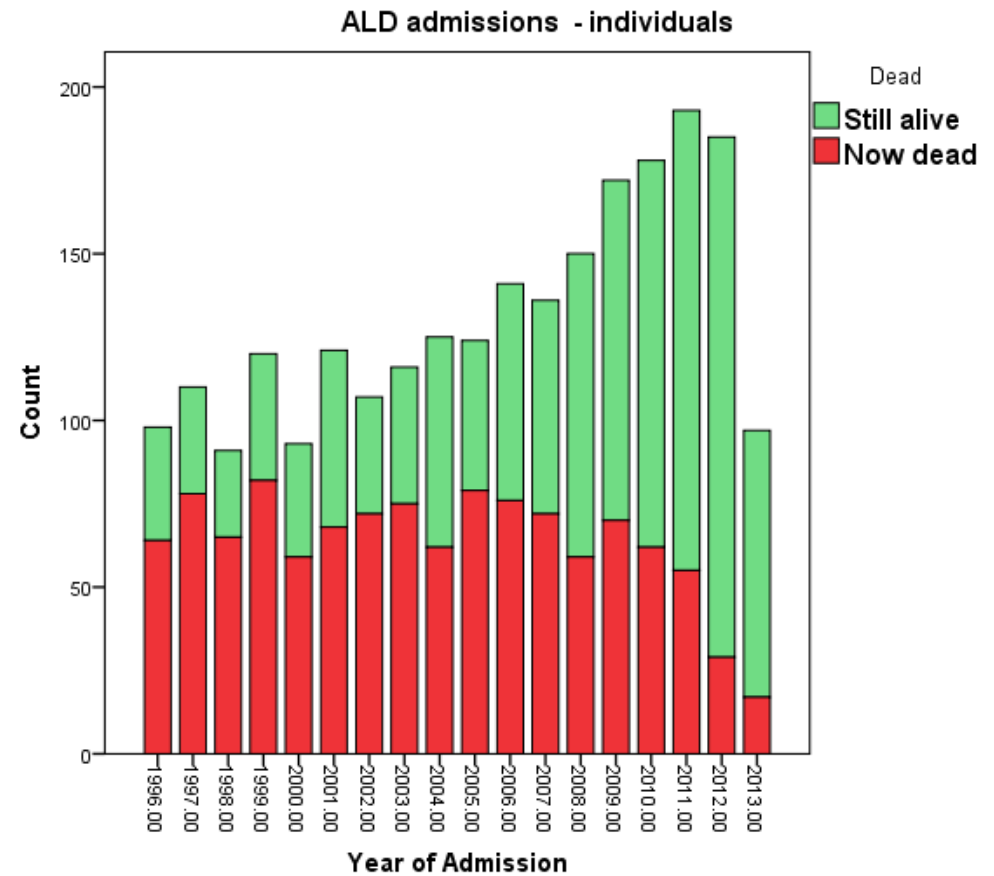
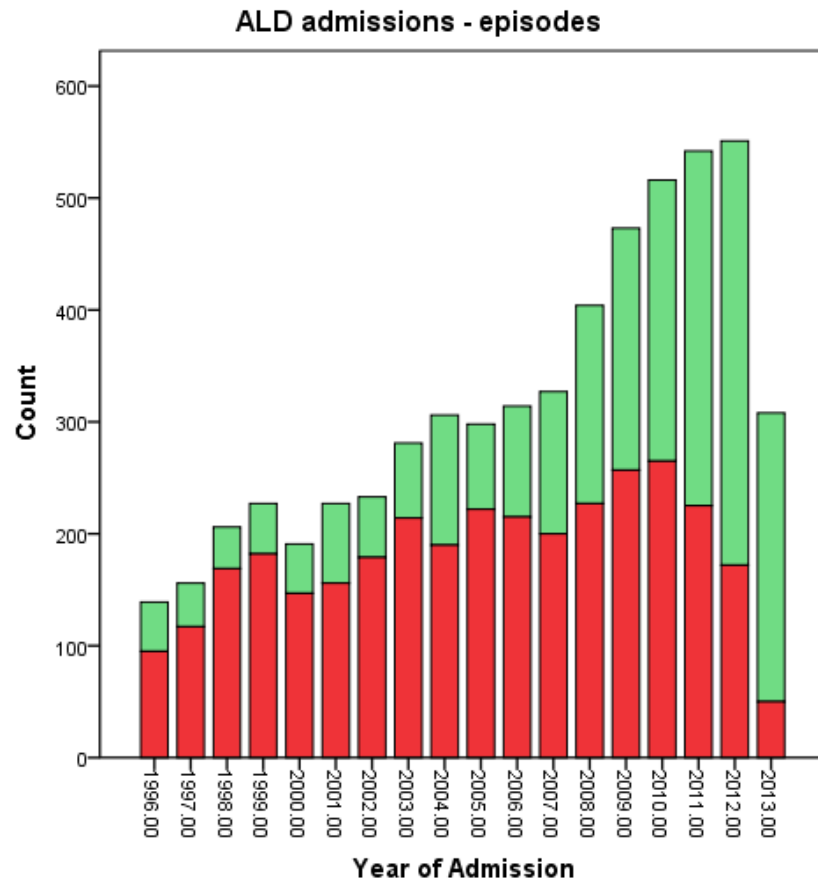
Alcohol in a General Hospital

(liver disease and dinosaurs)

Nick Sheron

University of Southampton and
Royal College of Physicians London

Admissions to the liver unit in Southampton with alcohol related liver disease



80% of directly attributable alcohol deaths are from liver disease

80% of liver deaths are alcohol related

Liver disease kills young people

In the European region

Between ages of 15 and 50, liver disease results in 2.3 million years of life lost

80% of directly attributable alcohol deaths are from liver disease

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In the European region

Between ages of 15 and 50, liver disease results in 2.3 million years of life lost

More than:	Lung cancer
	Breast Cancer
	Cervical Cancer
	Ovarian Cancer
	Prostate Cancer

80% of directly attributable alcohol deaths are from liver disease

80% of liver deaths are alcohol related

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In the European region

Between ages of 15 and 50, liver disease results in 2.3 million years of life lost

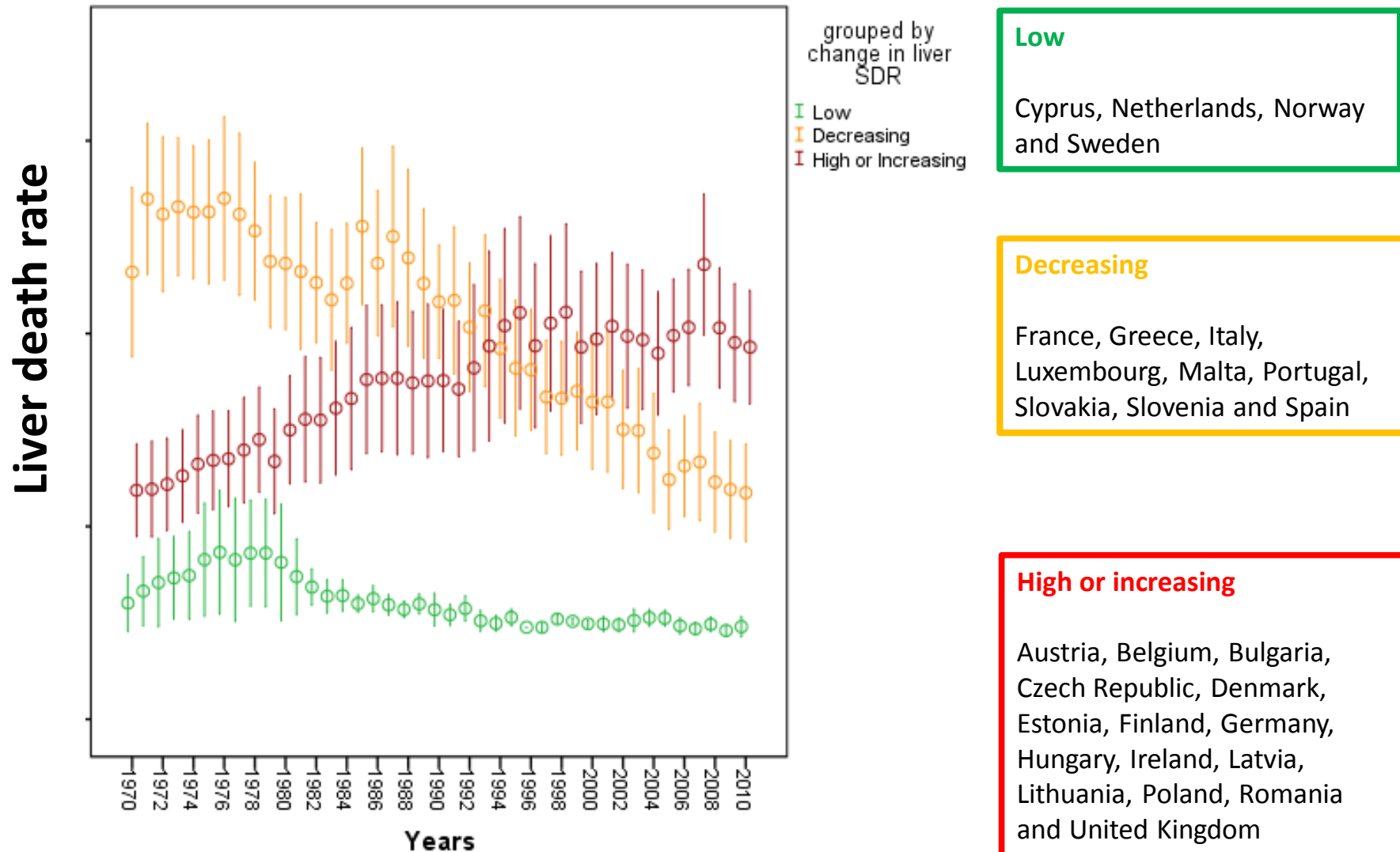
More than:

Lung cancer
Breast Cancer
Cervical Cancer
Ovarian Cancer
Prostate Cancer

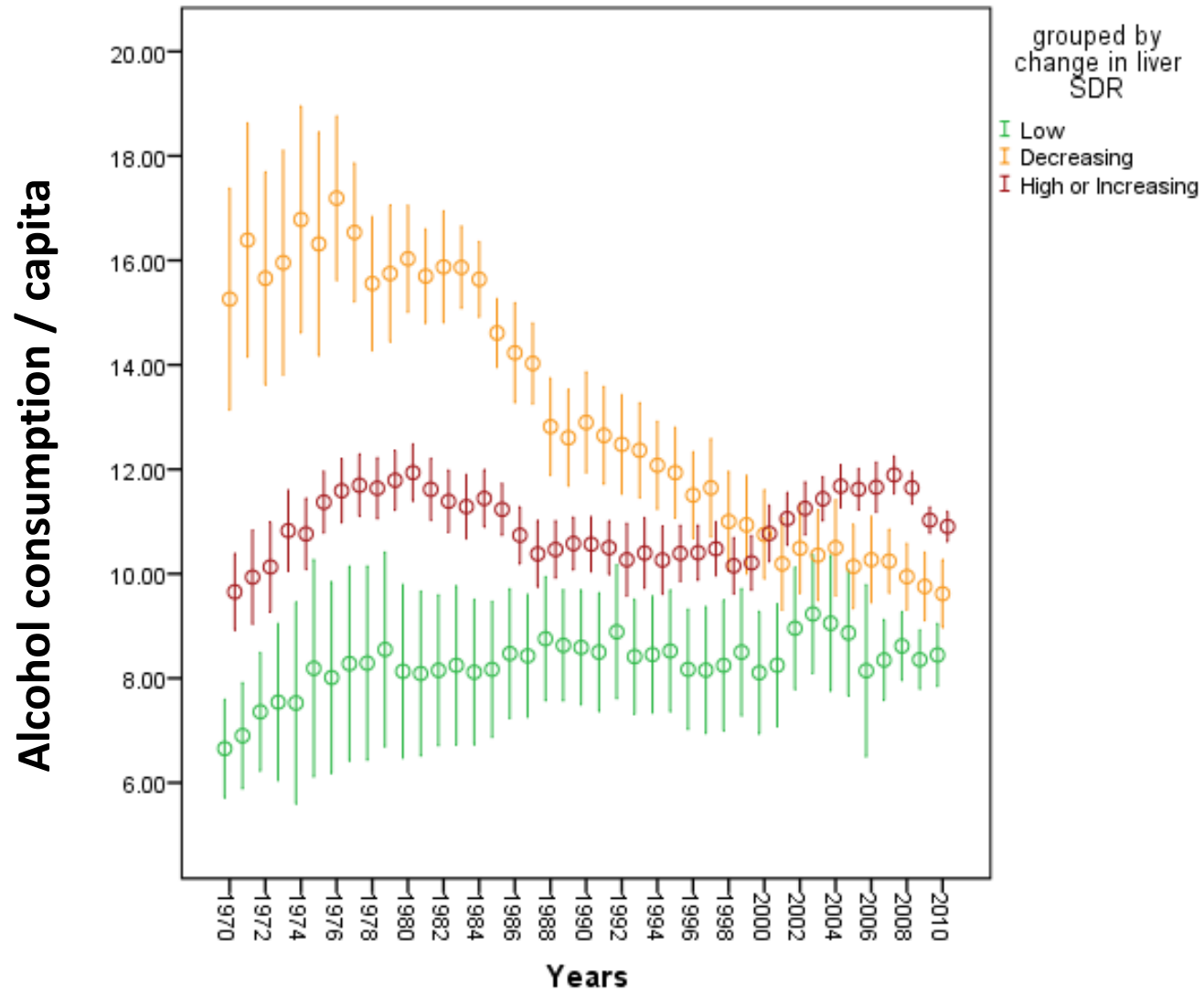


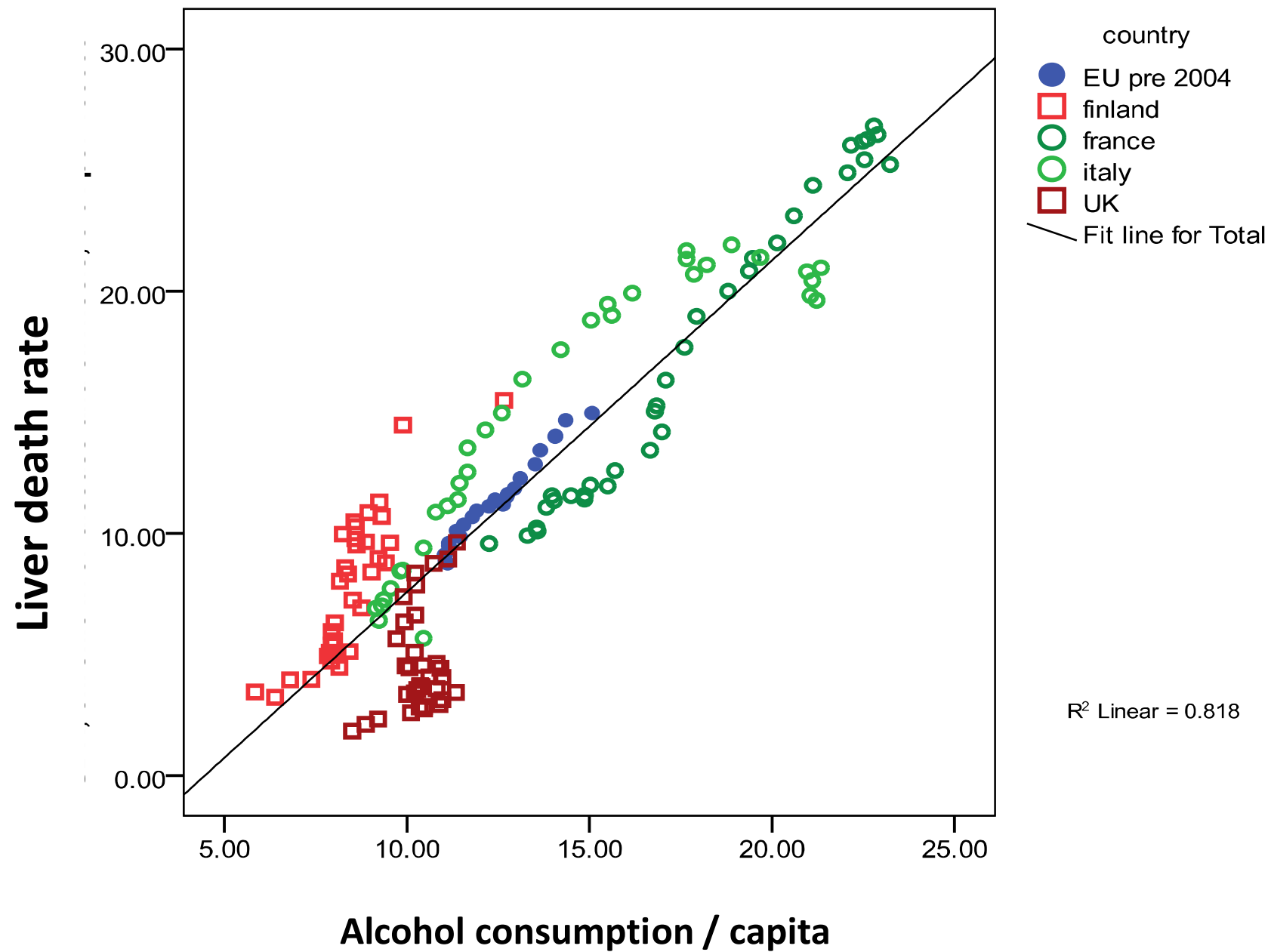
COMBINED

Trends in liver cirrhosis death rates - three groups of member states



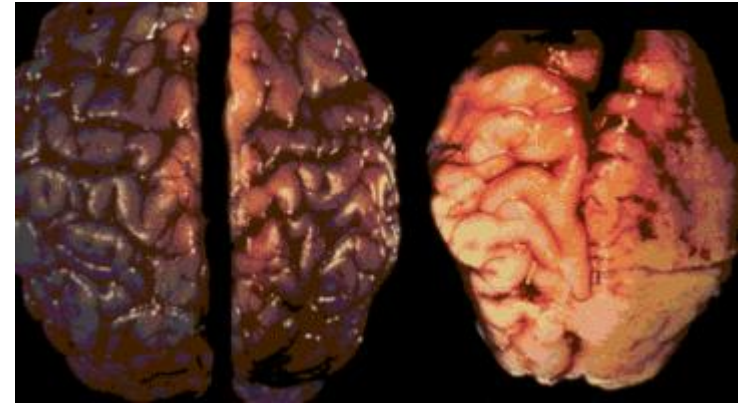
Trends in population alcohol consumption – same groups of member states





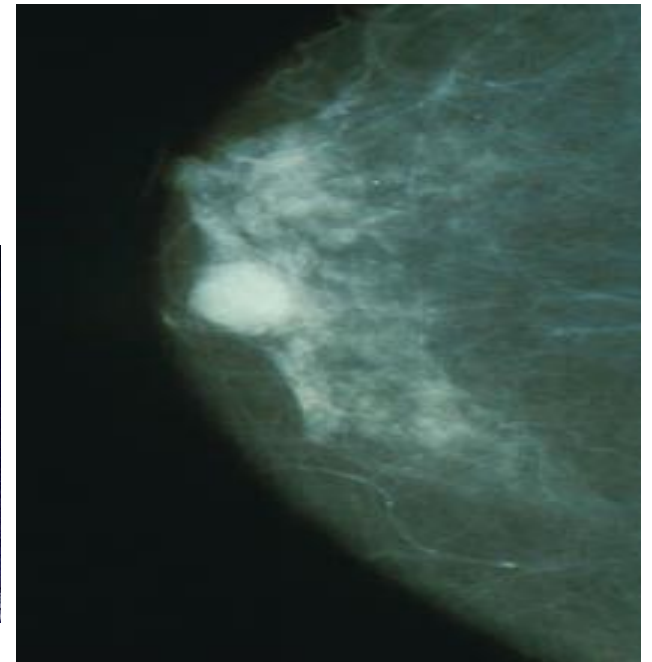
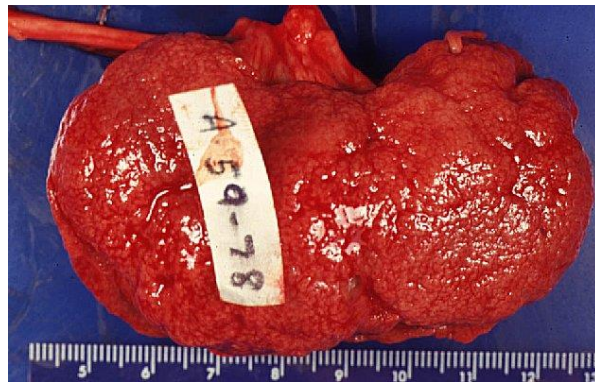
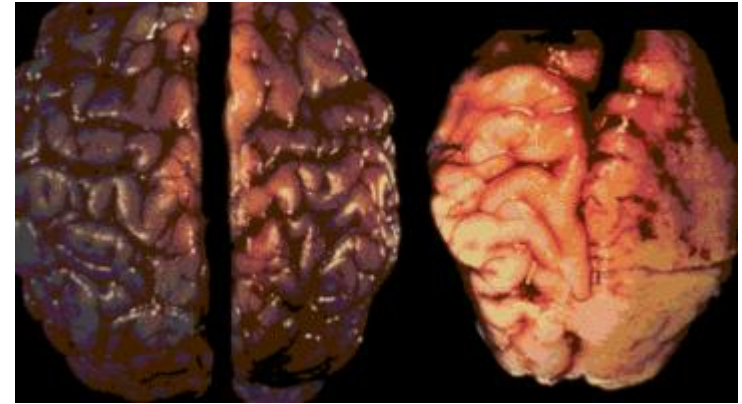


Cirrhosis



Foetal alcohol syndrome





Hypertensive heart

Hypertensive kidney

Cancer

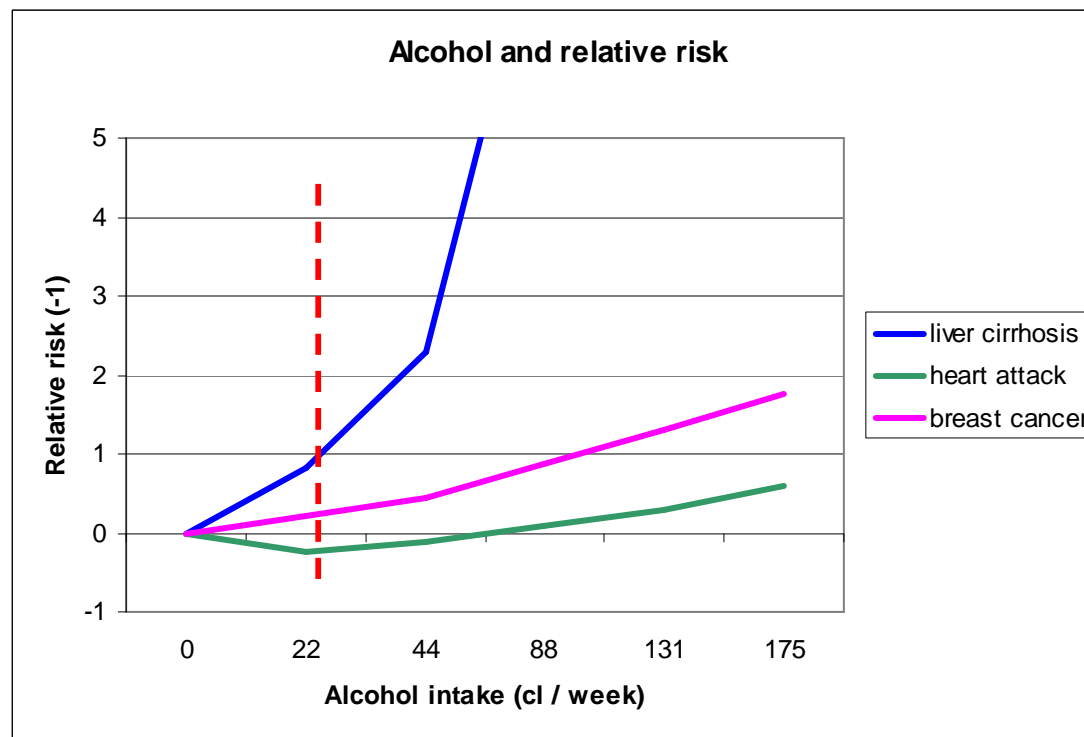


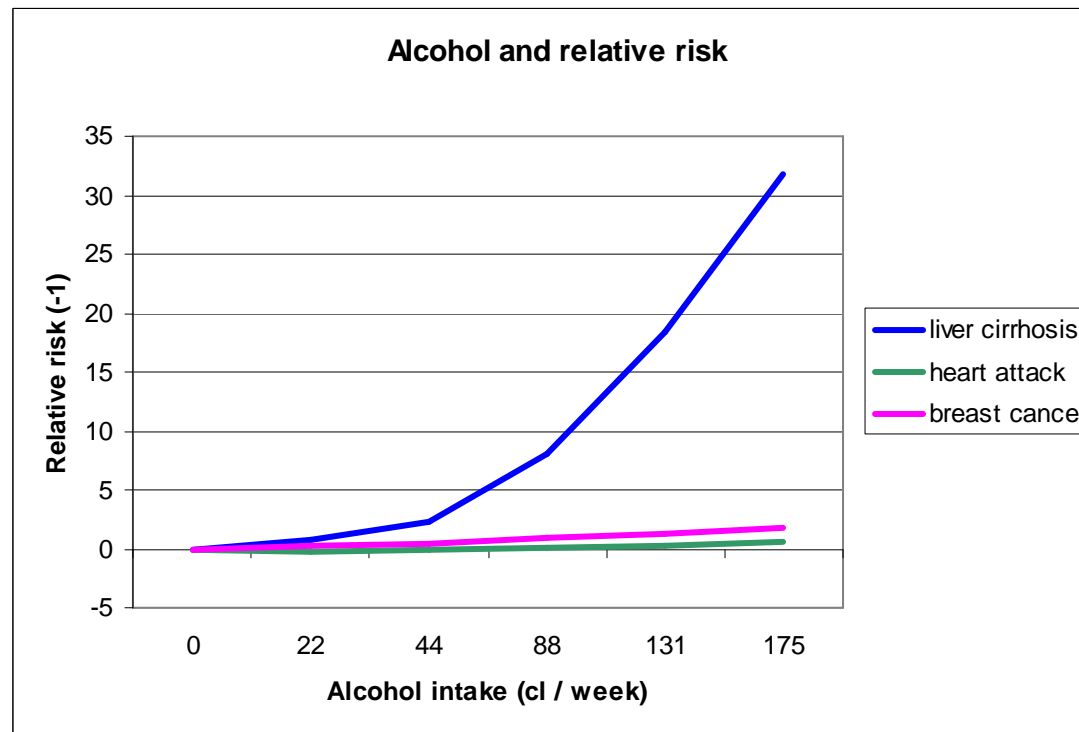
Alcohol and the stealth diseases

	Men	Women
Hypertensive disease	32%	17%
Cardiac arrhythmia	36%	32%
Cancer		10%*

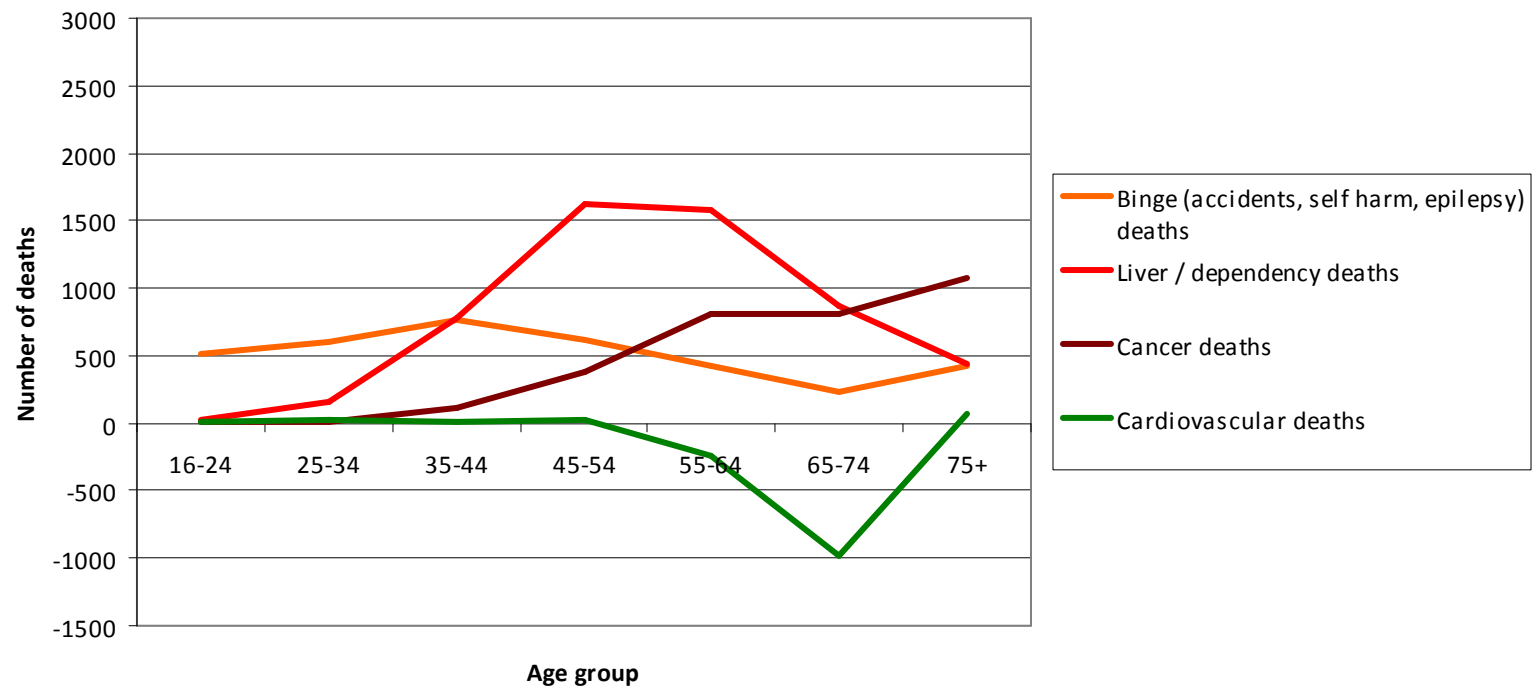
Attributable fractions for England . mean for age 45-65, Bellis

*Alcohol attributable burden of incidence of cancer in eight European countries based on results from prospective cohort study . BMJ 2011

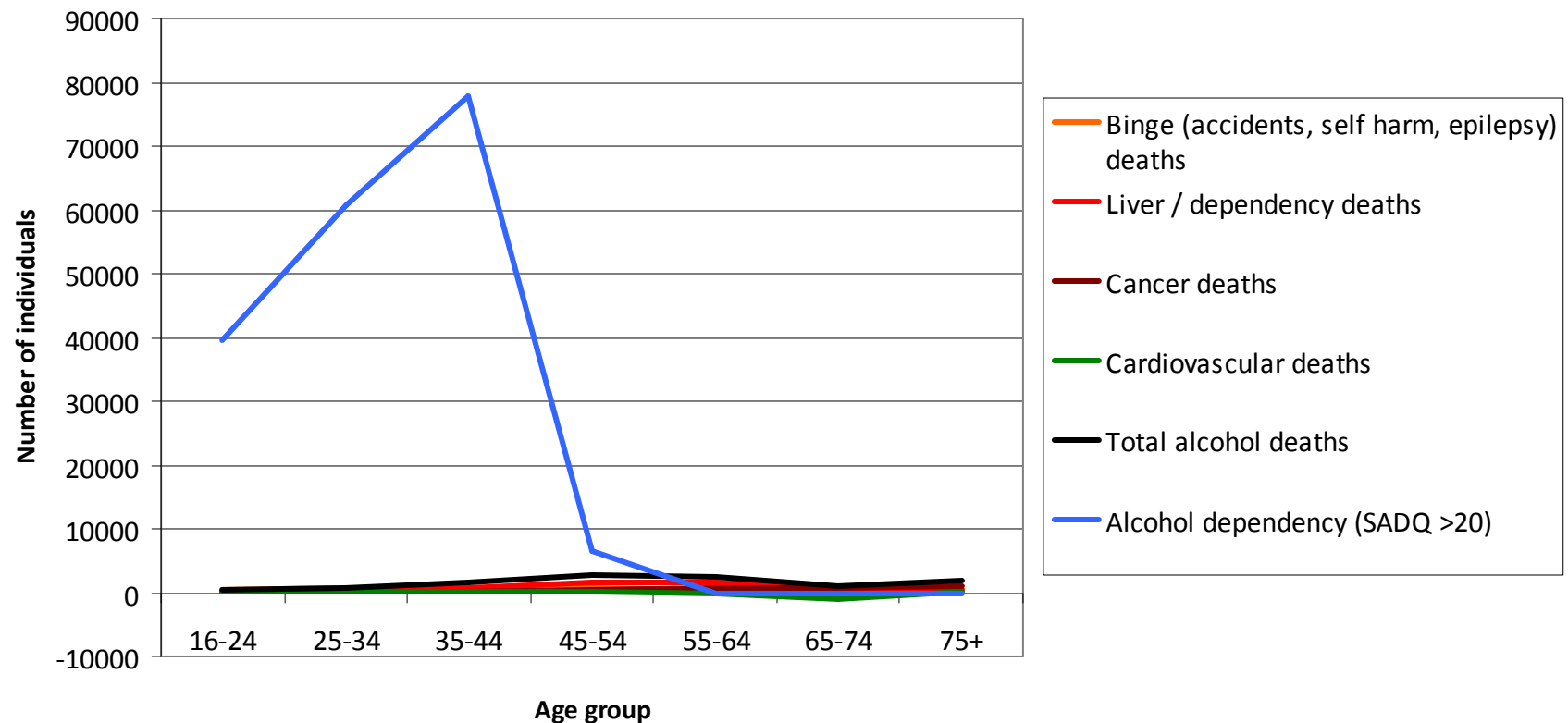




Number of alcohol attributable deaths in England by age group (2005)

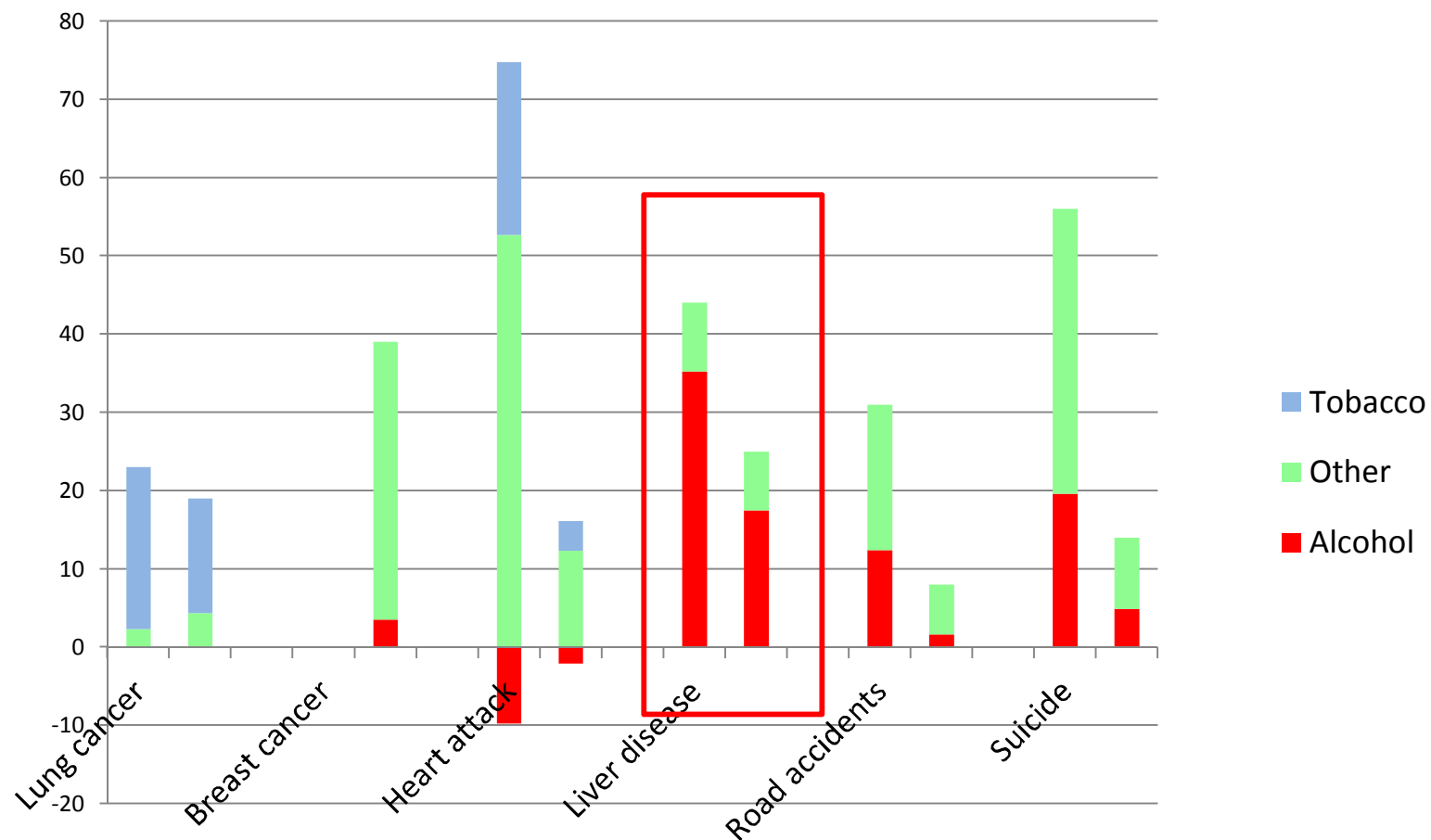


**Number of alcohol attributable deaths in England by age group (2005)
together with total number of people with significant alcohol dependency**

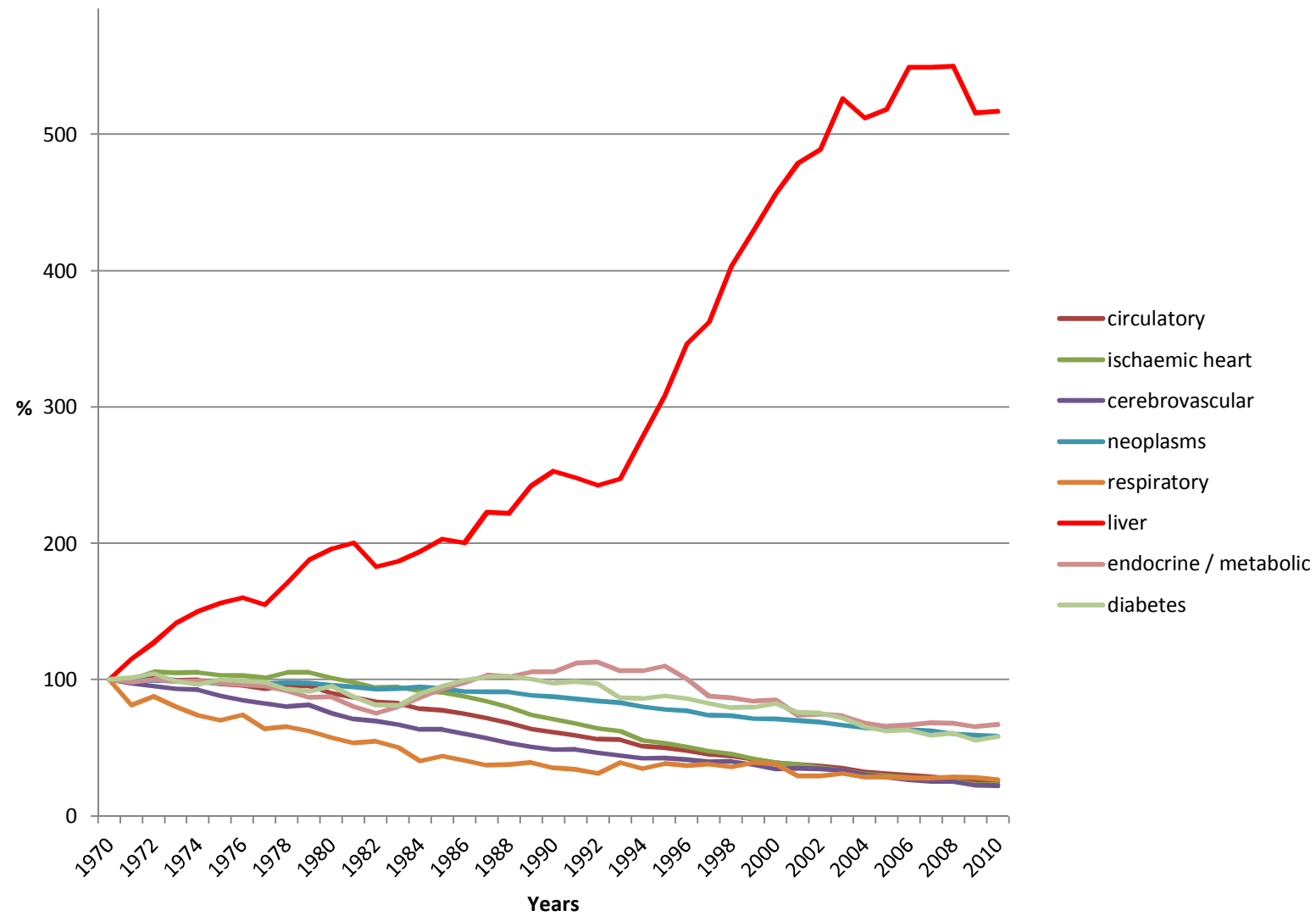


Note this prevalence of addiction and incidence of death – an unfair comparison purely to illustrate the different ages ranges; addiction is a disease of youth.

The leading six causes of working years of life lost
England & Wales – men / women age 15-64

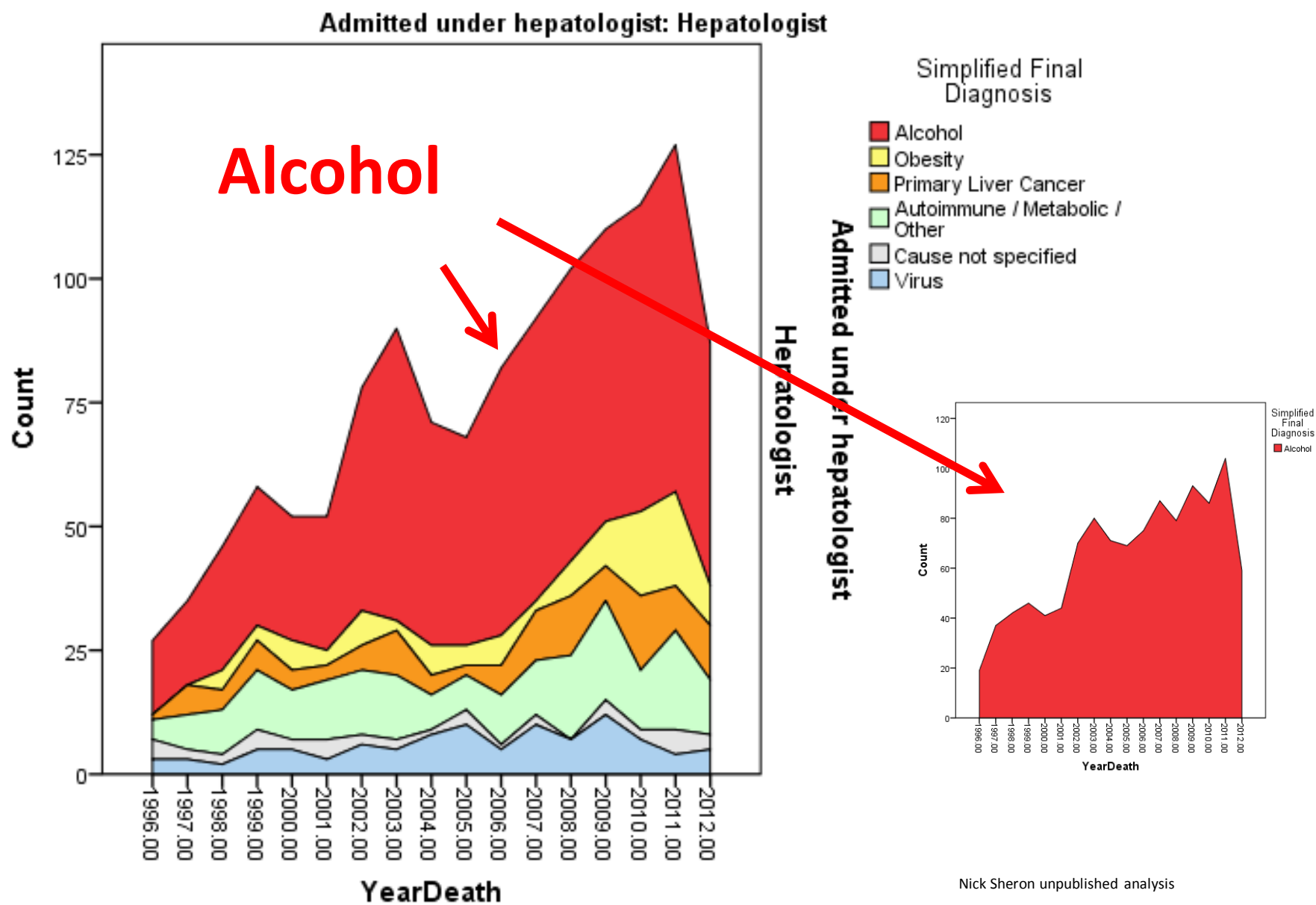


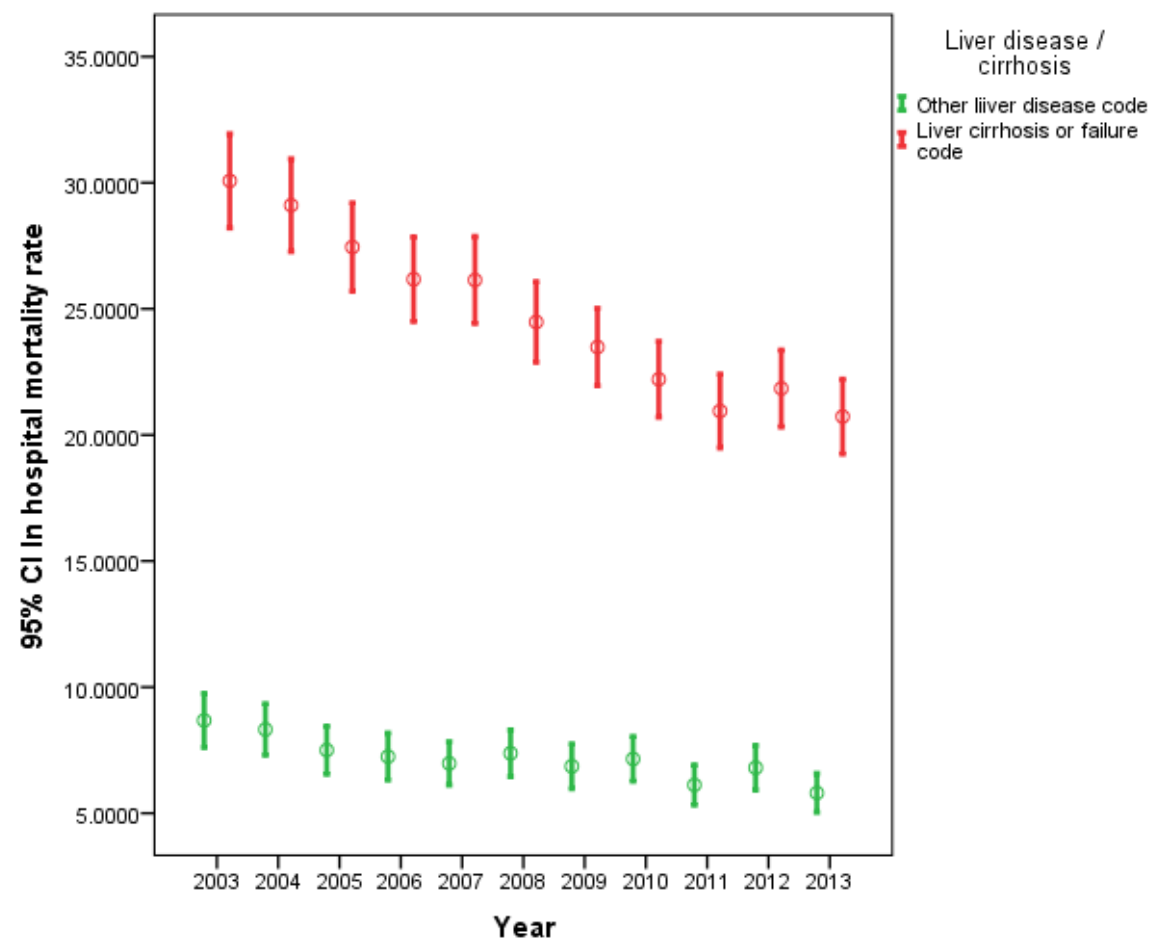
Trends in UK death rates from all diseases – normalised to 100% in 1970



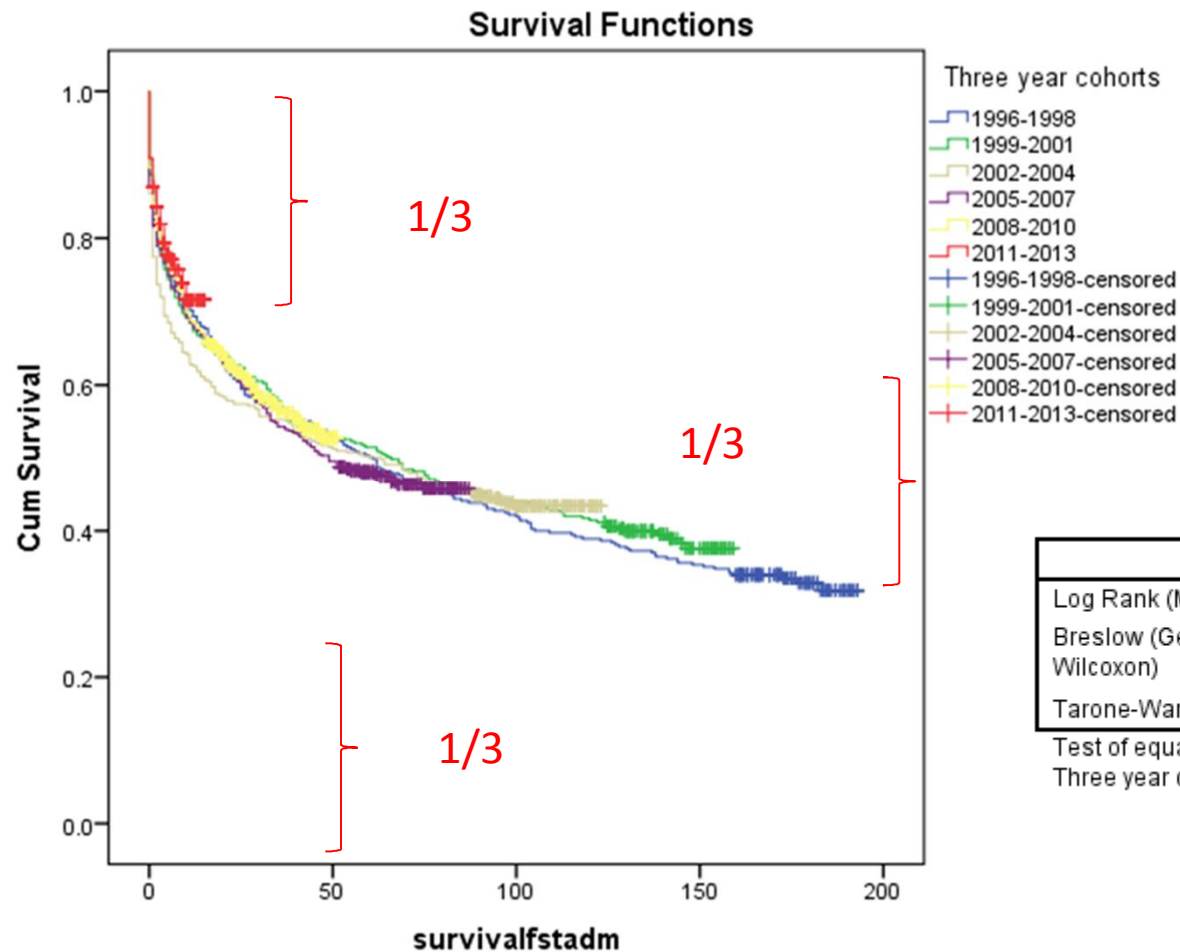
Data from WHO-HFA database downloaded Oct 2013

Soton liver unit admissions now dead by year of death





Survival of admissions to the Liver Unit Southampton

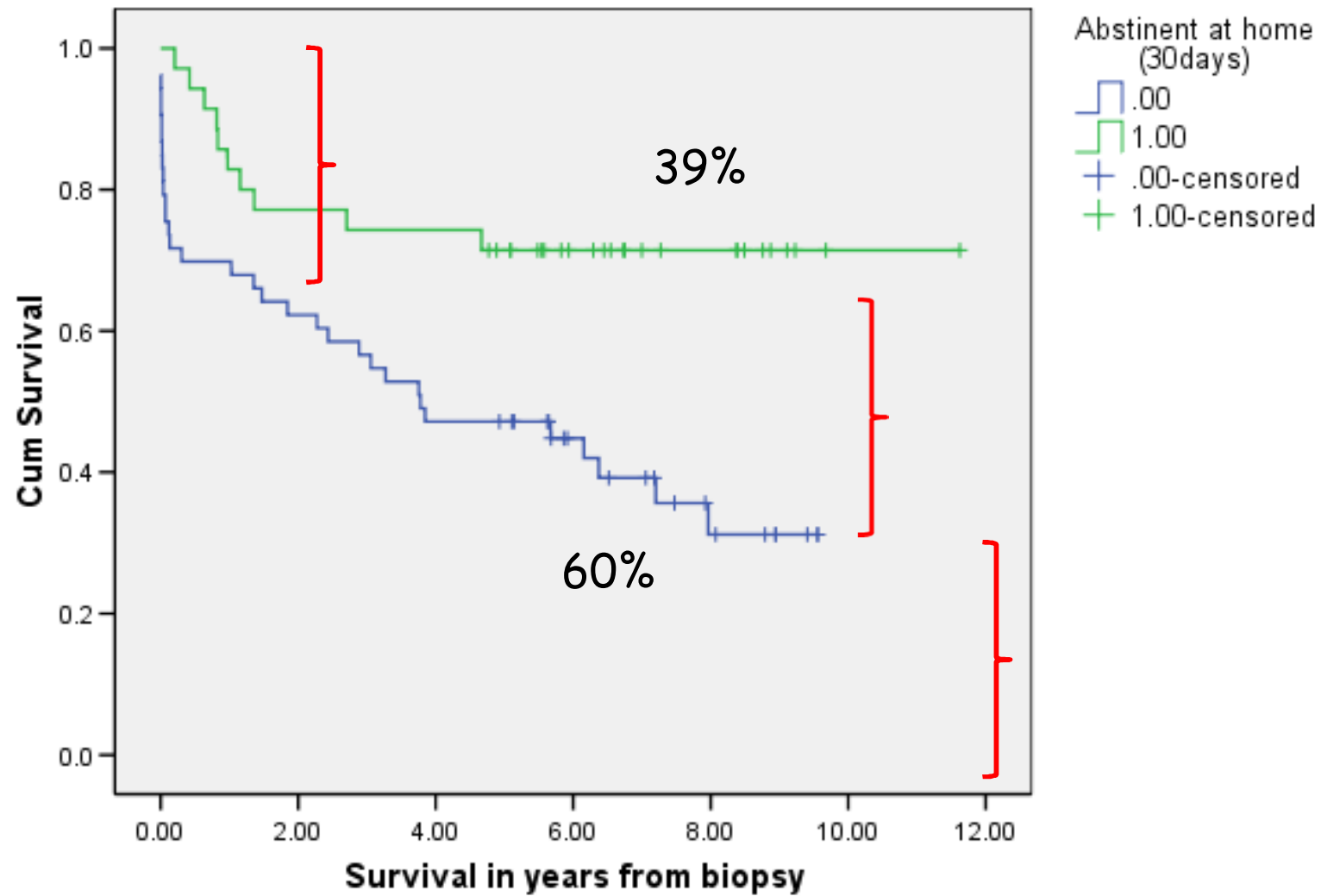


Overall Comparisons

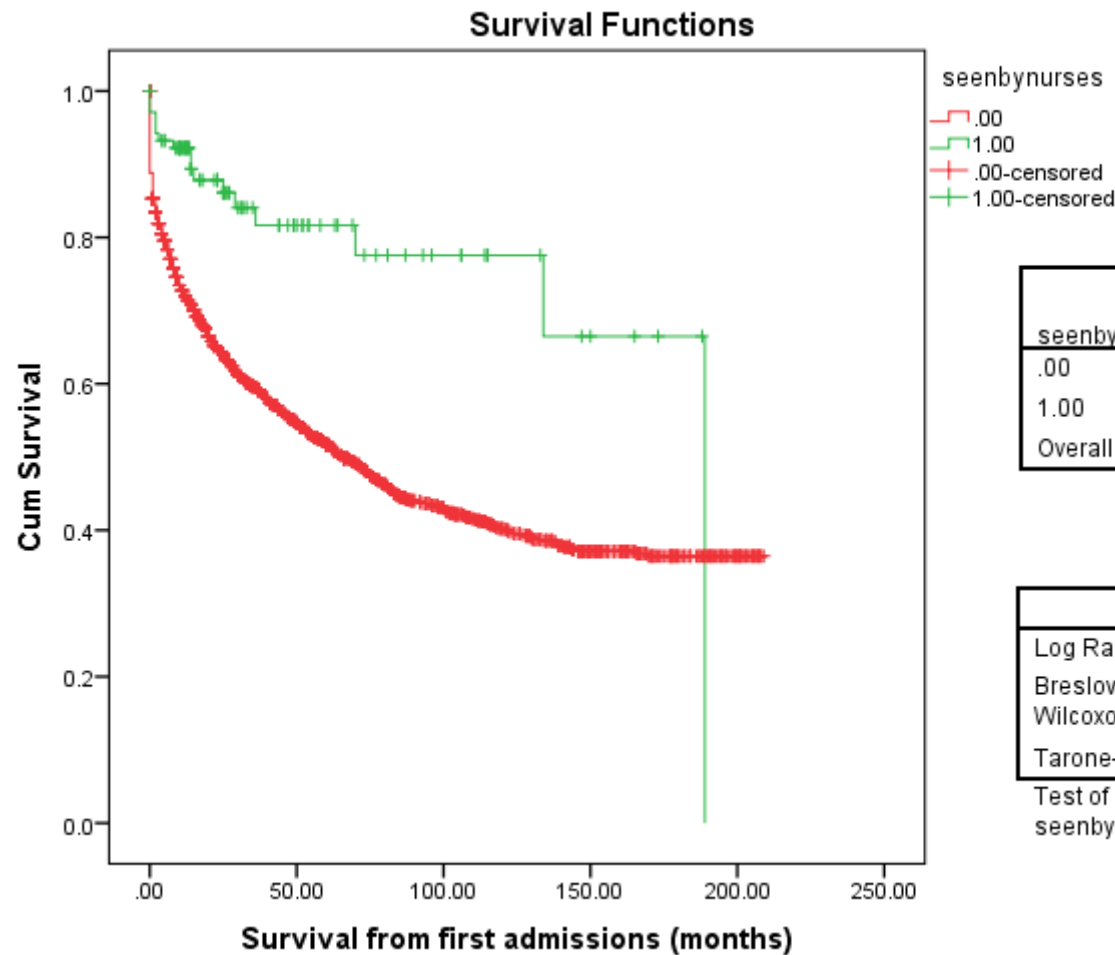
	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	3.255	5	.661
Breslow (Generalized Wilcoxon)	5.288	5	.382
Tarone-Ware	3.966	5	.554

Test of equality of survival distributions for the different levels of Three year cohorts.

Drinking behaviour determines long term mortality



Non day case admissions with ALD, survival from first ever liver admission
 If seen by specialist alcohol nurses – preliminary data



Case Processing Summary

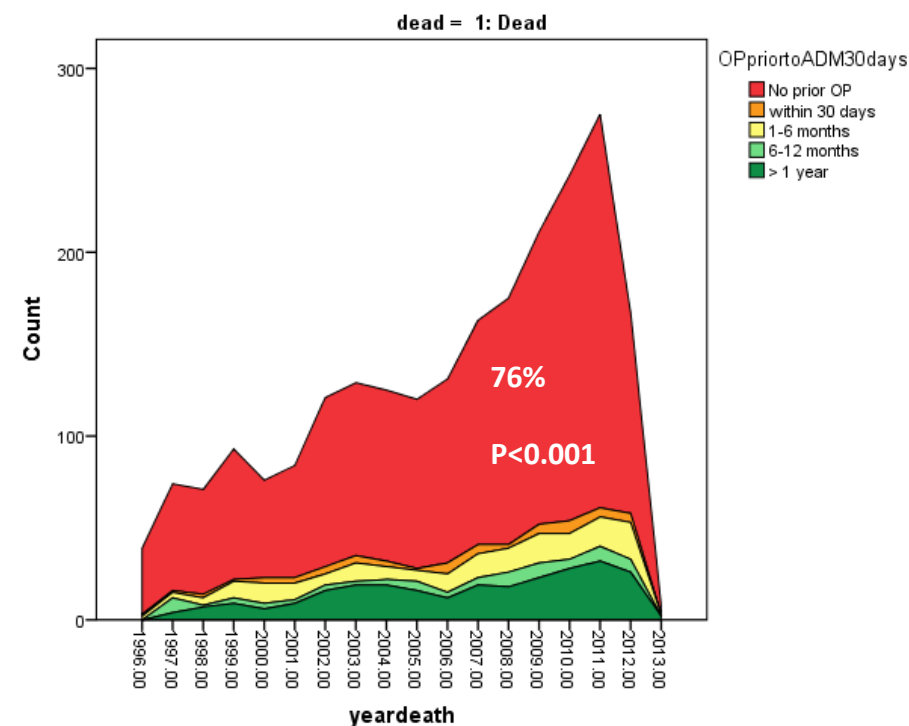
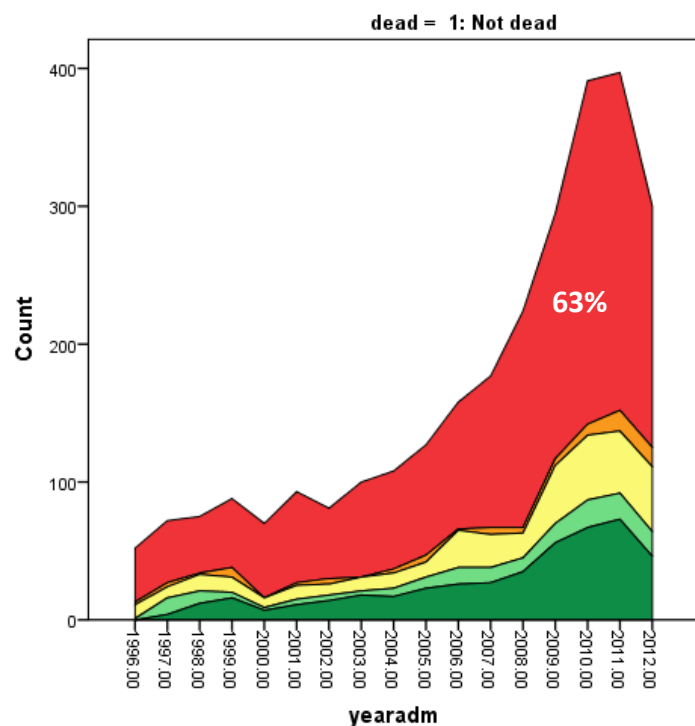
seenbynurses	Total N	N of Events	Censored	
			N	Percent
.00	2258	1128	1130	50.0%
1.00	104	17	87	83.7%
Overall	2362	1145	1217	51.5%

Overall Comparisons

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	21.871	1	.000
Breslow (Generalized Wilcoxon)	21.979	1	.000
Tarone-Ware	22.911	1	.000

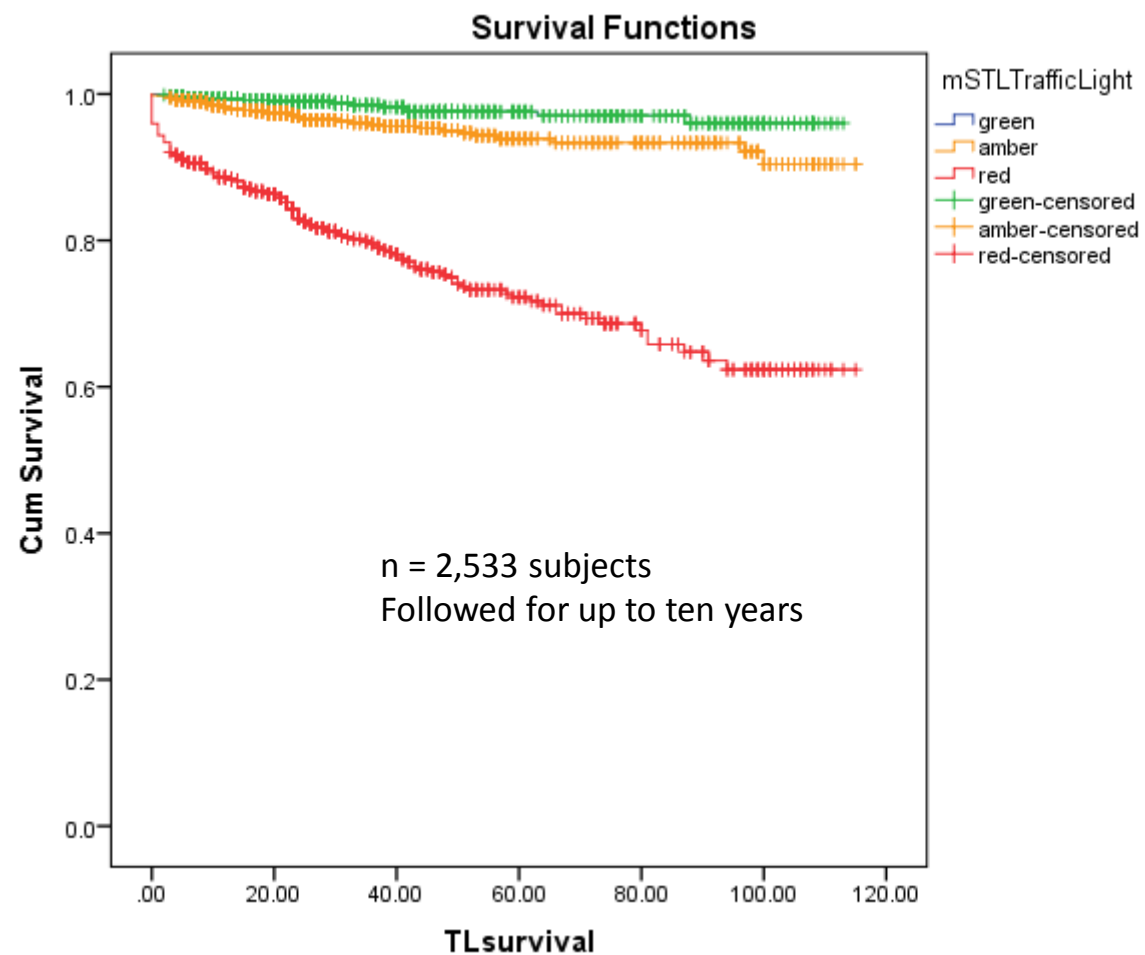
Test of equality of survival distributions for the different levels of seenbynurses.

Prior liver outpatient referrals in 5,112 Southampton first admissions with cirrhosis



dead = 1 * OPprioritoADM30days Crosstabulation

			OPprioritoADM30days					Total
			No prior OP	within 30 days	1-6 months	6-12 months	> 1 year	
dead = 1	Not dead	Count	1772	79	348	157	452	2808
		% within dead = 1	63.1%	2.8%	12.4%	5.6%	16.1%	100.0%
	Dead	Count	1738	58	170	73	265	2304
		% within dead = 1	75.4%	2.5%	7.4%	3.2%	11.5%	100.0%
Total		Count	3510	137	518	230	717	5112
		% within dead = 1	68.7%	2.7%	10.1%	4.5%	14.0%	100.0%



Case Processing Summary

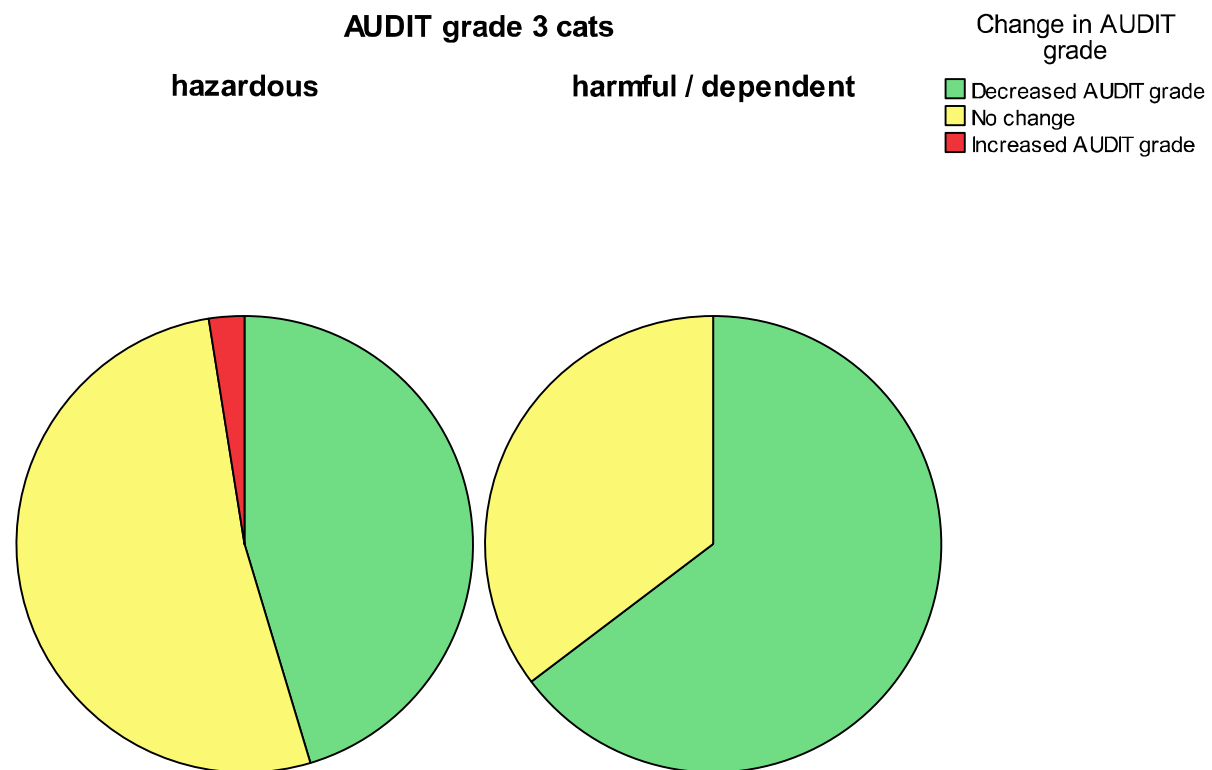
mSTLTrafficLight	Total N	N of Events	Censored	
			N	Percent
green	770	14	756	98.2%
amber	1021	42	979	95.9%
red	742	160	582	78.4%
Overall	2533	216	2317	91.5%

Overall Comparisons

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	191.702	1	.000
Breslow (Generalized Wilcoxon)	173.197	1	.000
Tarone-Ware	186.108	1	.000

The vector of trend weights is -1, 0, 1. This is the default.

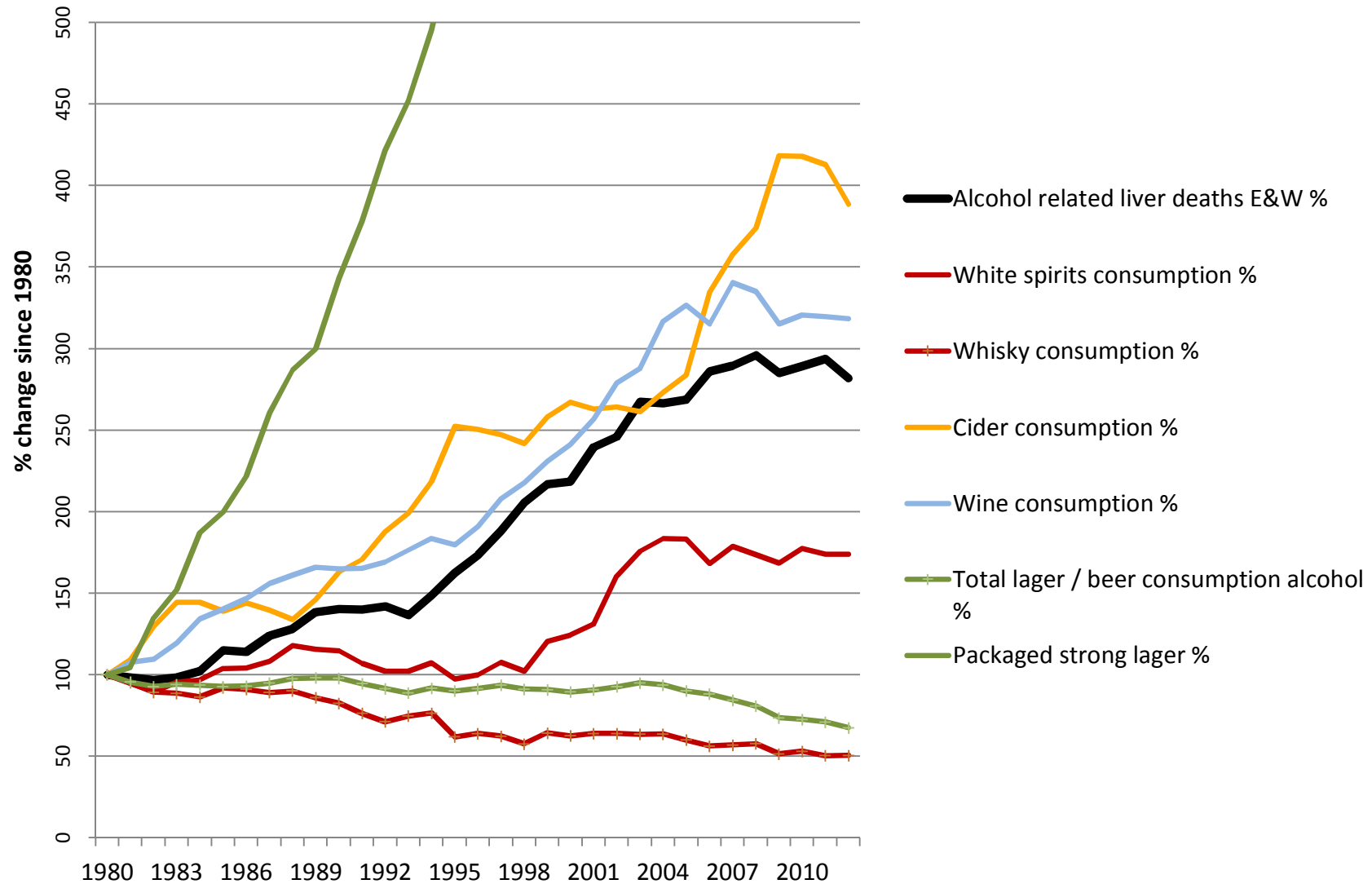
Safe drinking in community patients told their degree of liver damage



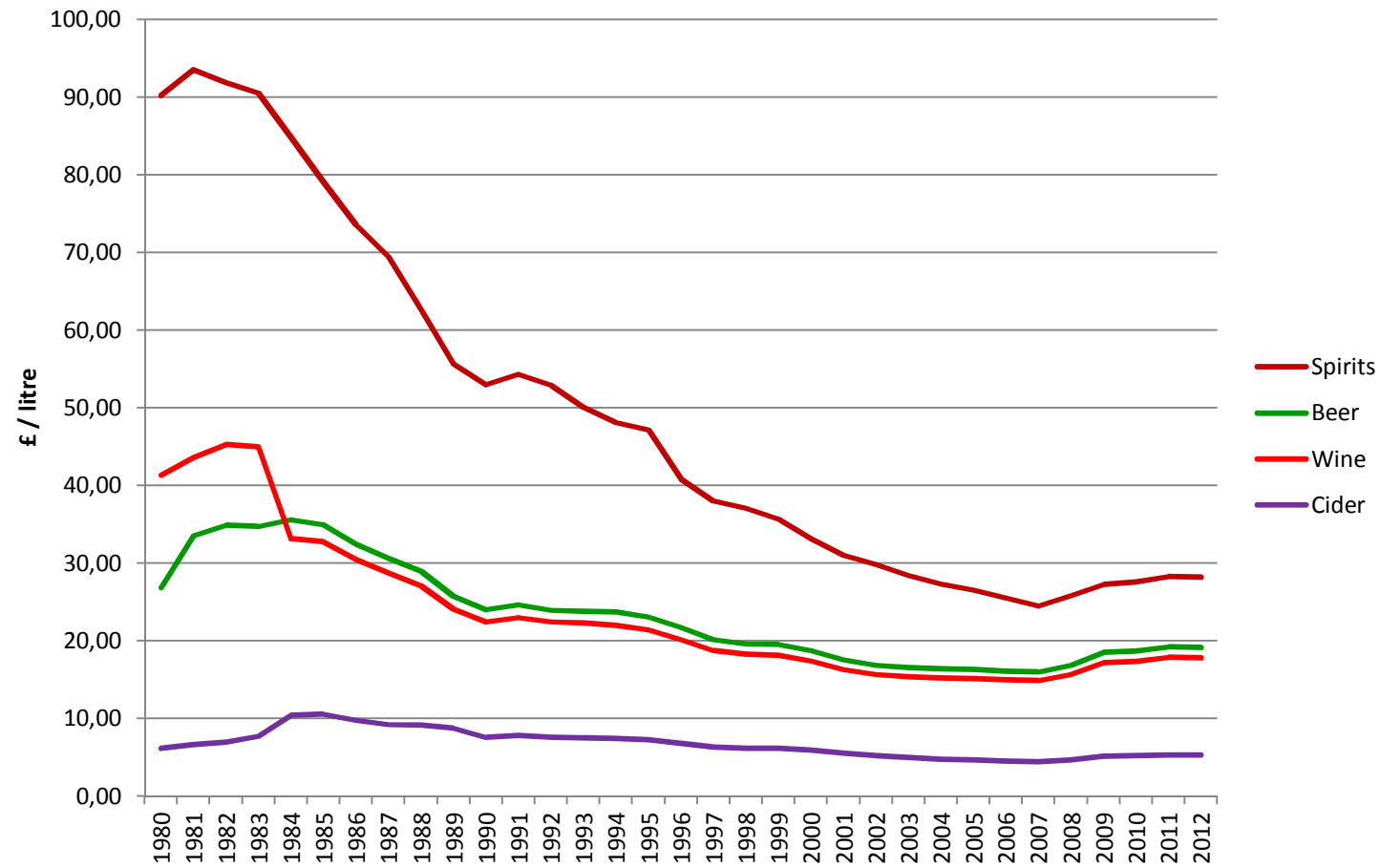
“international evidence suggests that problem drinkers are least likely to be deterred by price rises.” WSTA

The heaviest drinkers are ones the **MOST** likely to stop drinking,

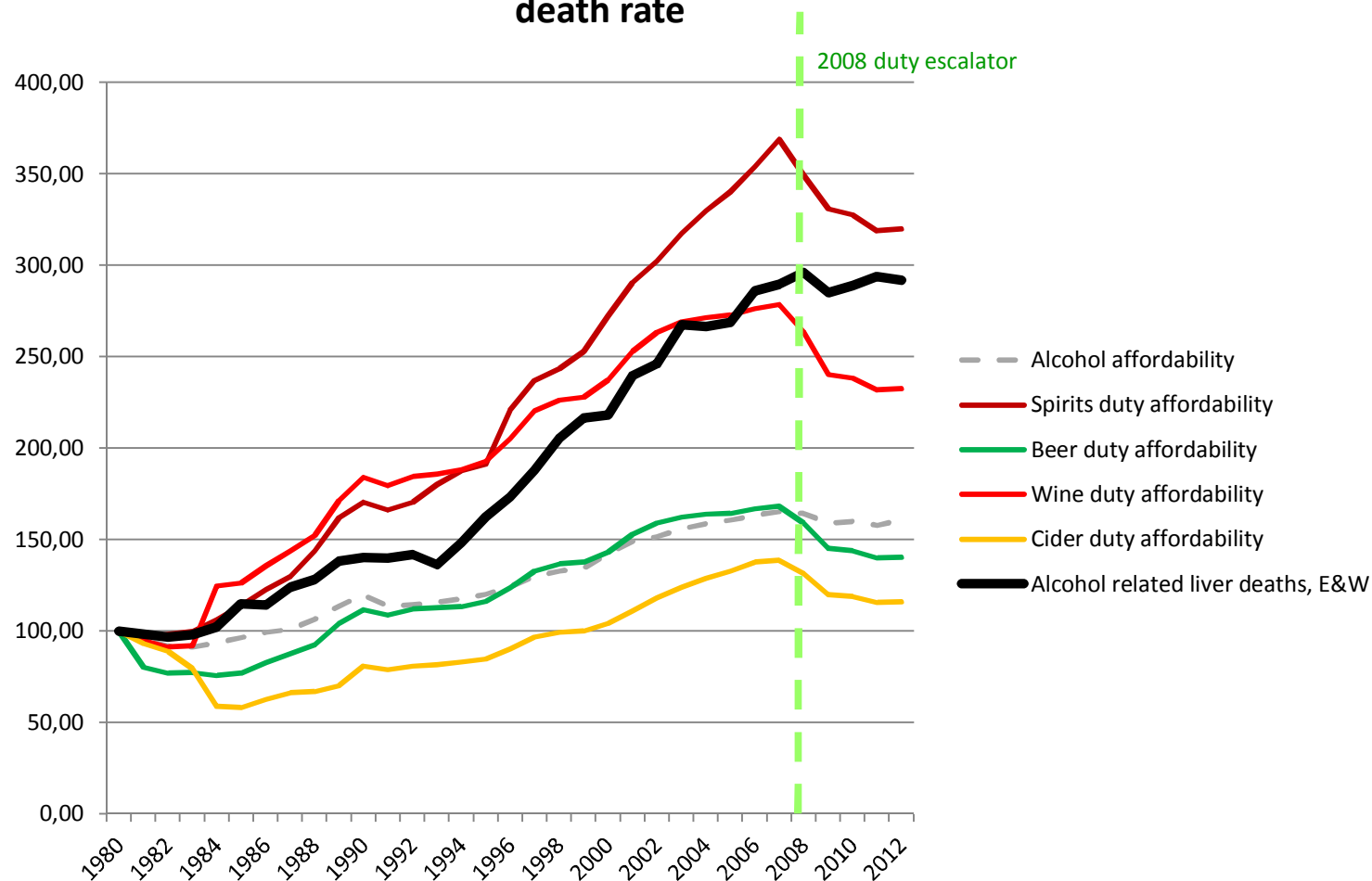
Upward trends in consumption of spirits, wine, strong lager and cider and liver death rate



**Impact of duty changes on corrected cost of pure alcohol
compared with actual price in 2012**

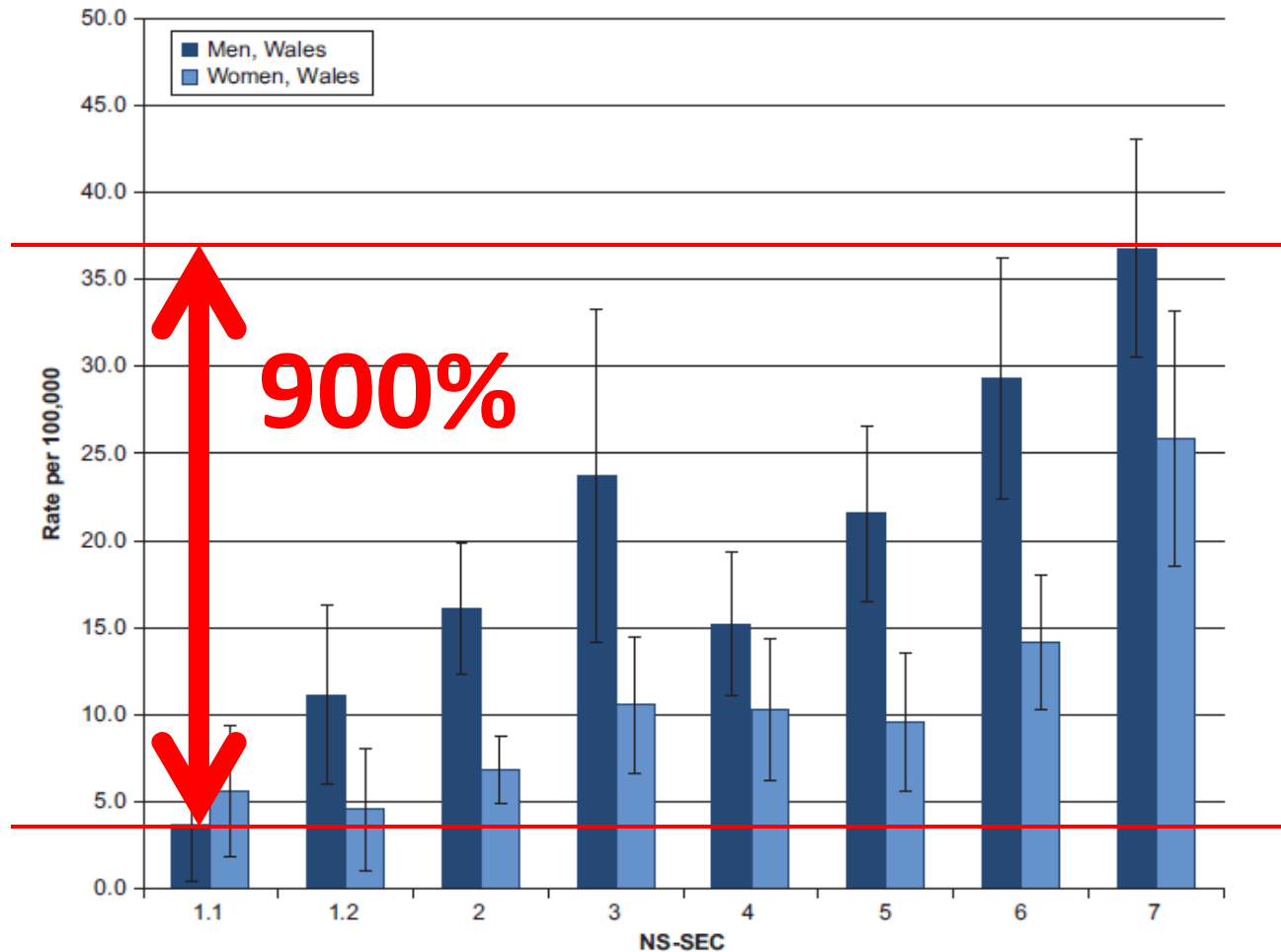


Impact of duty changes on the affordability of alcohol with liver death rate



Impact of alcohol duty on affordability adjusted for changes in retail price index and disposable income,
Using same methodology as used by ONS in Statistics of Alcohol 2013

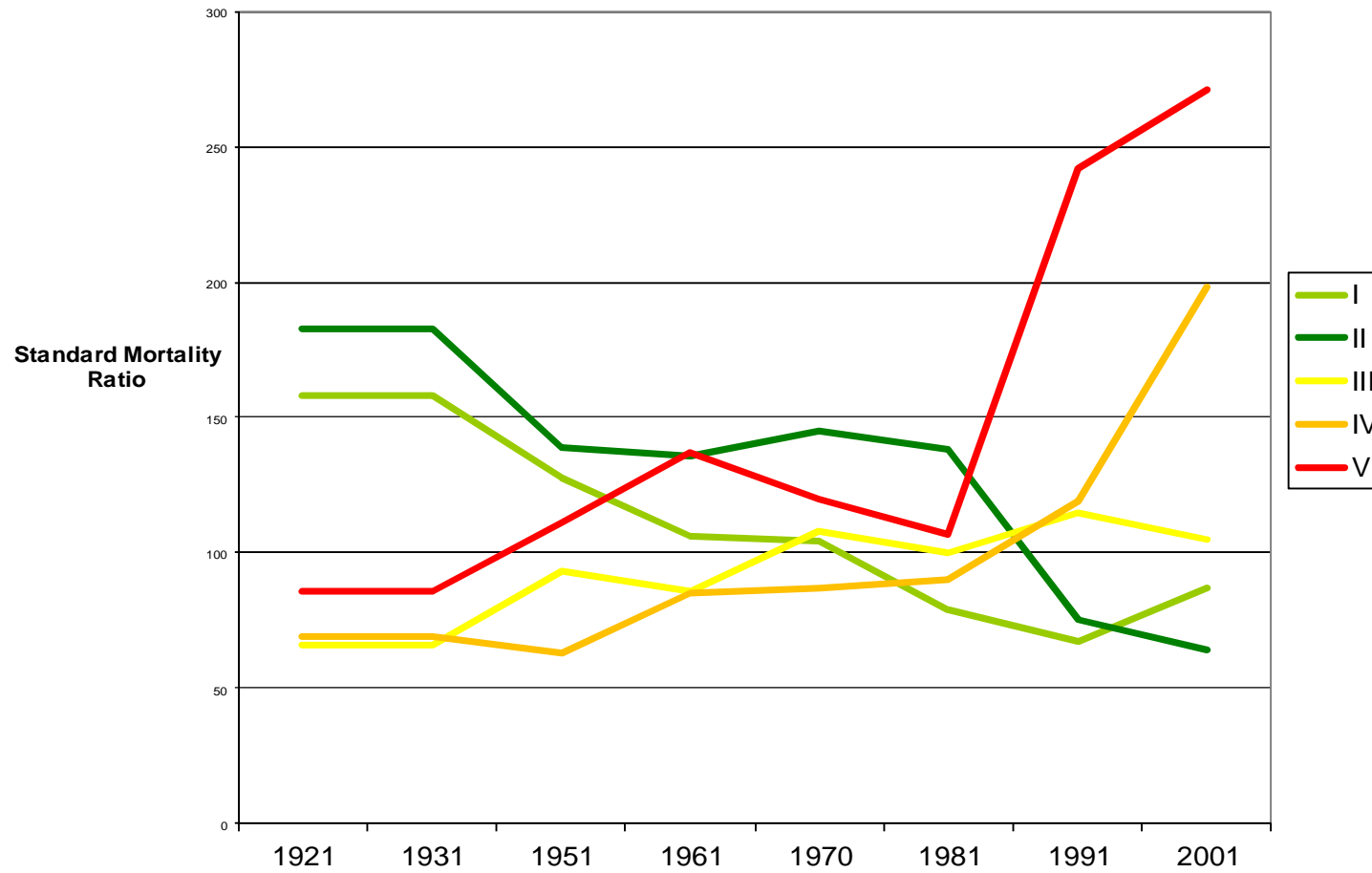
In Wales there is a 900% increase in alcohol related mortality with deprivation



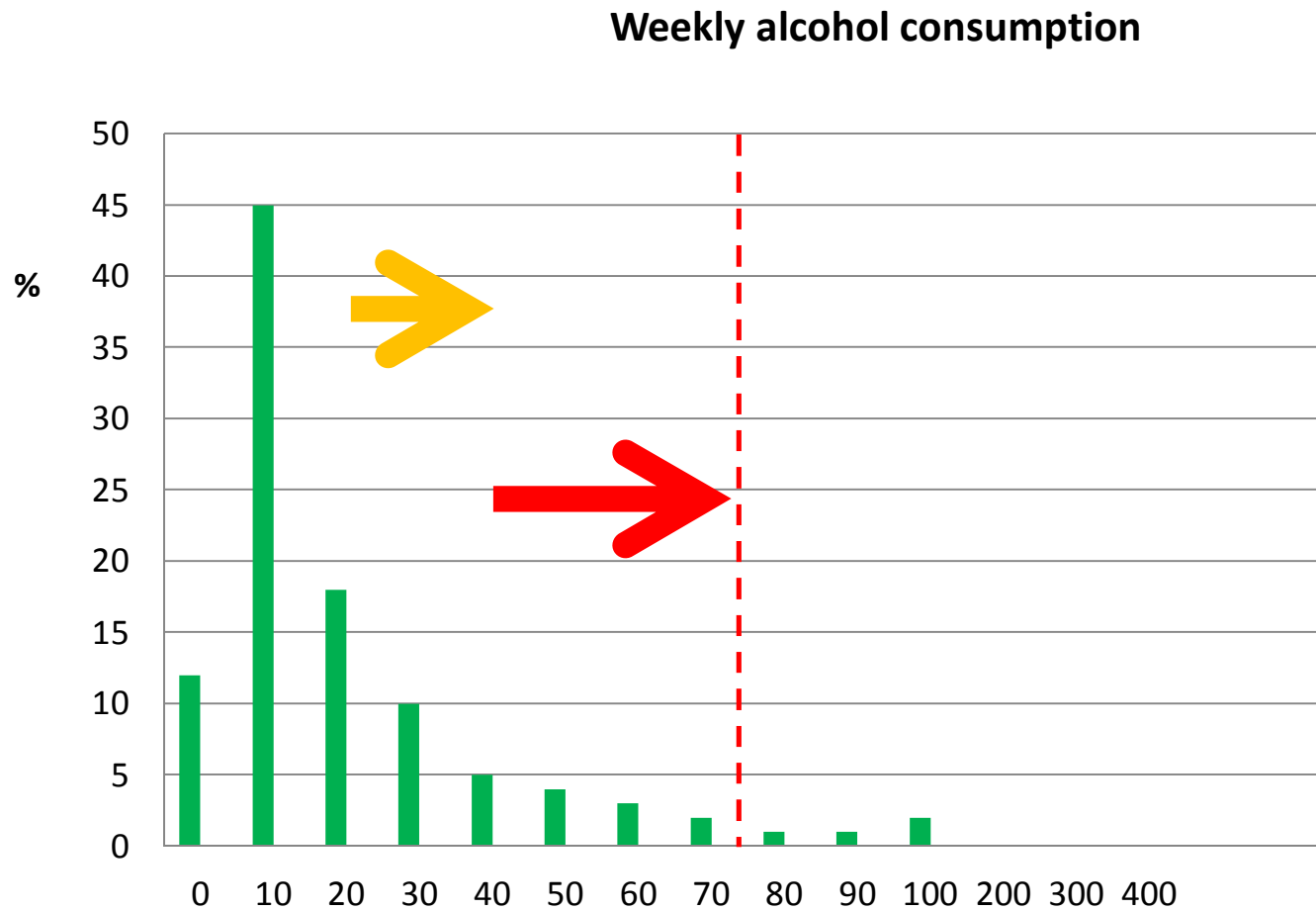
Social inequalities in alcohol-related adult mortality by National Statistics Socio-economic Classification, England and Wales, 2001–03

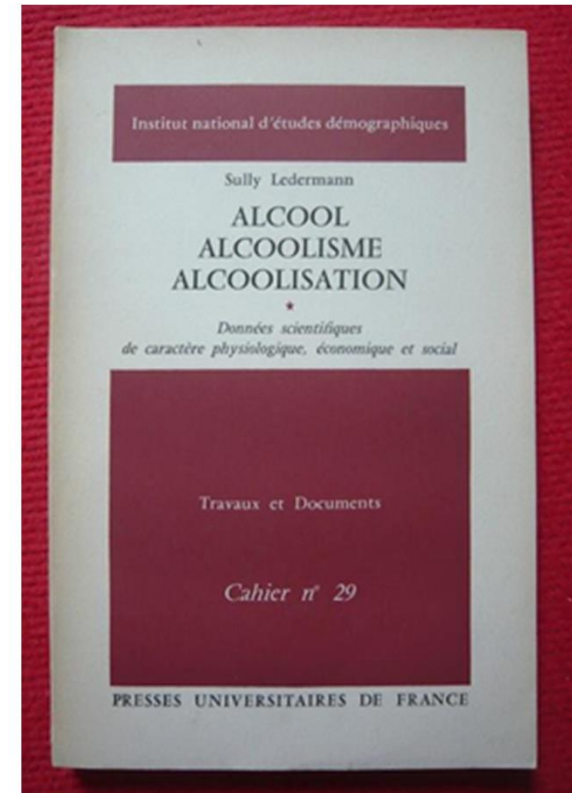
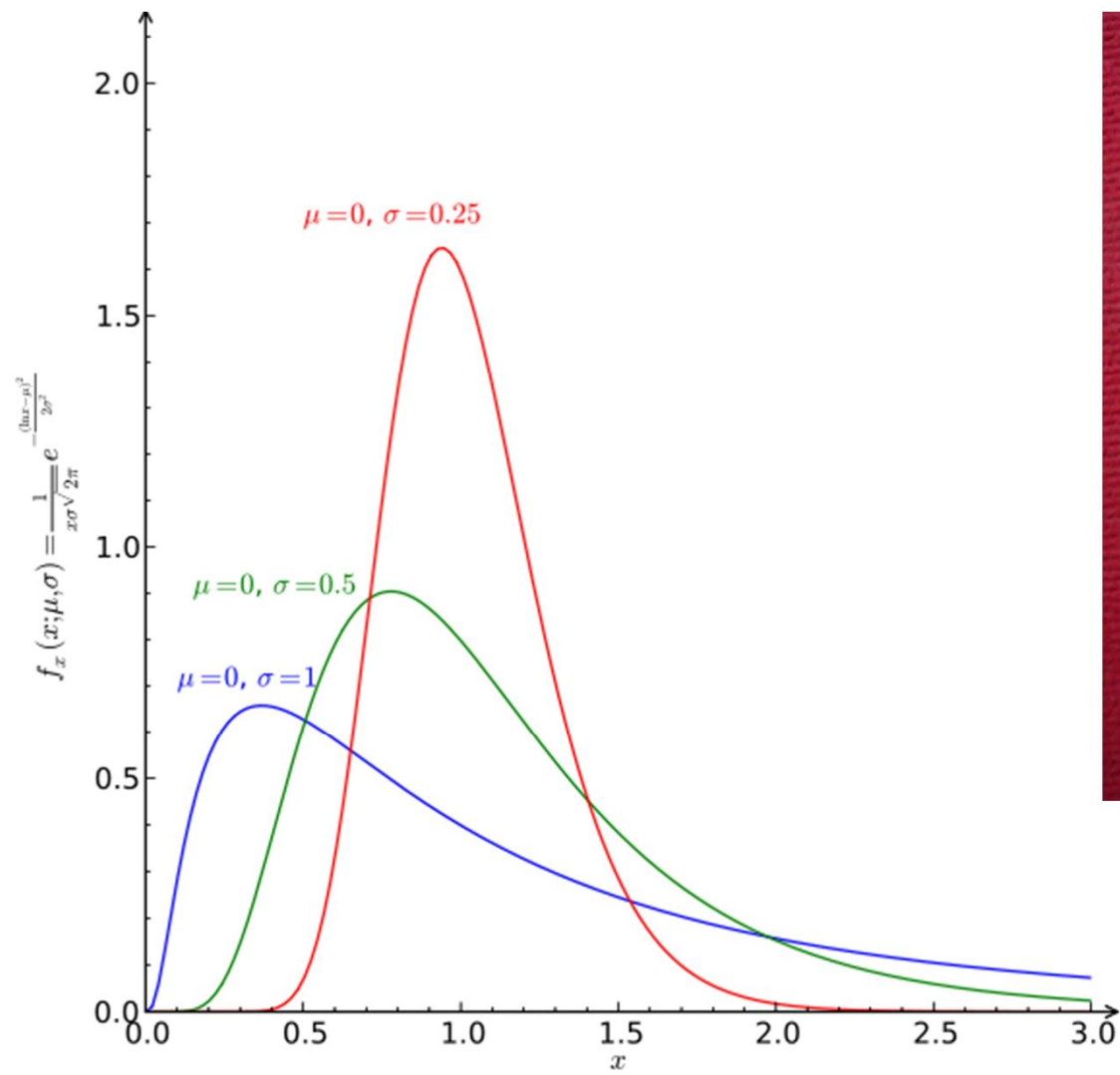
Veronique Siegler, Alaa Al-Hamad, Brian Johnson, Claudia Wells Office for National Statistics and Nick Sheron Southampton University

Changes in liver mortality with Social Class



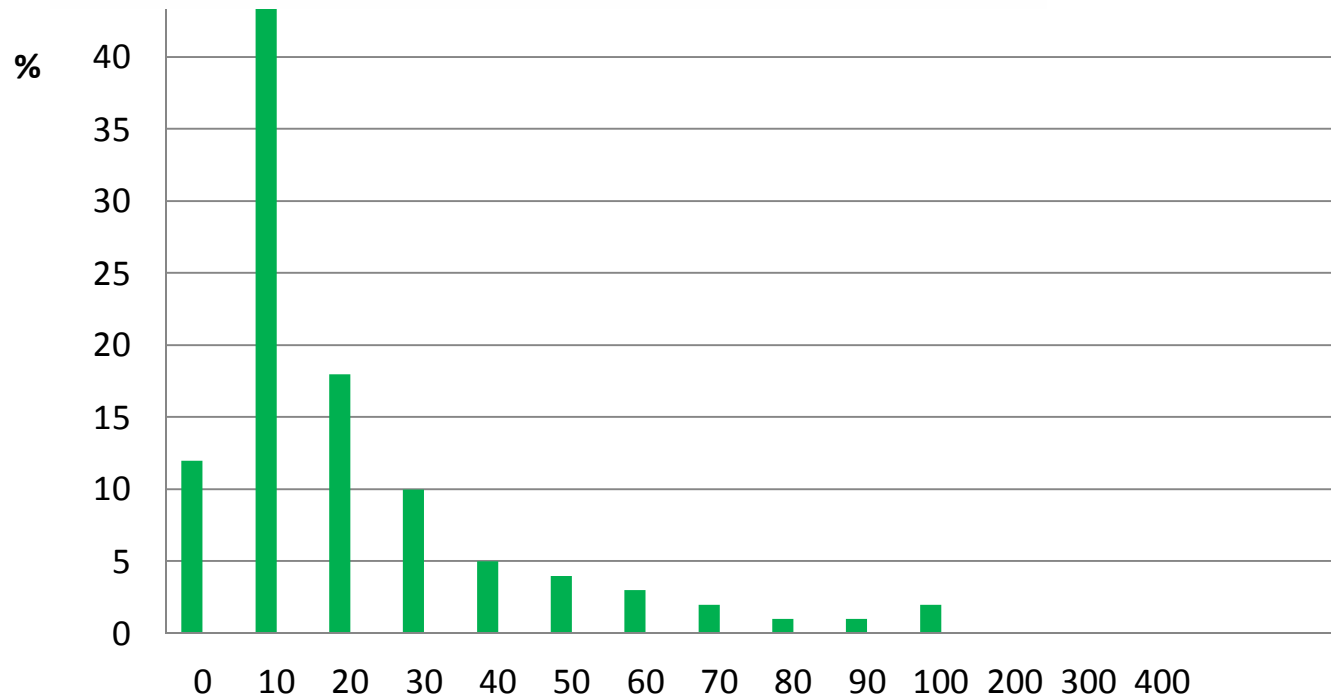
Weekly alcohol consumption Scottish Health Survey 2006
UK units (cl) / week

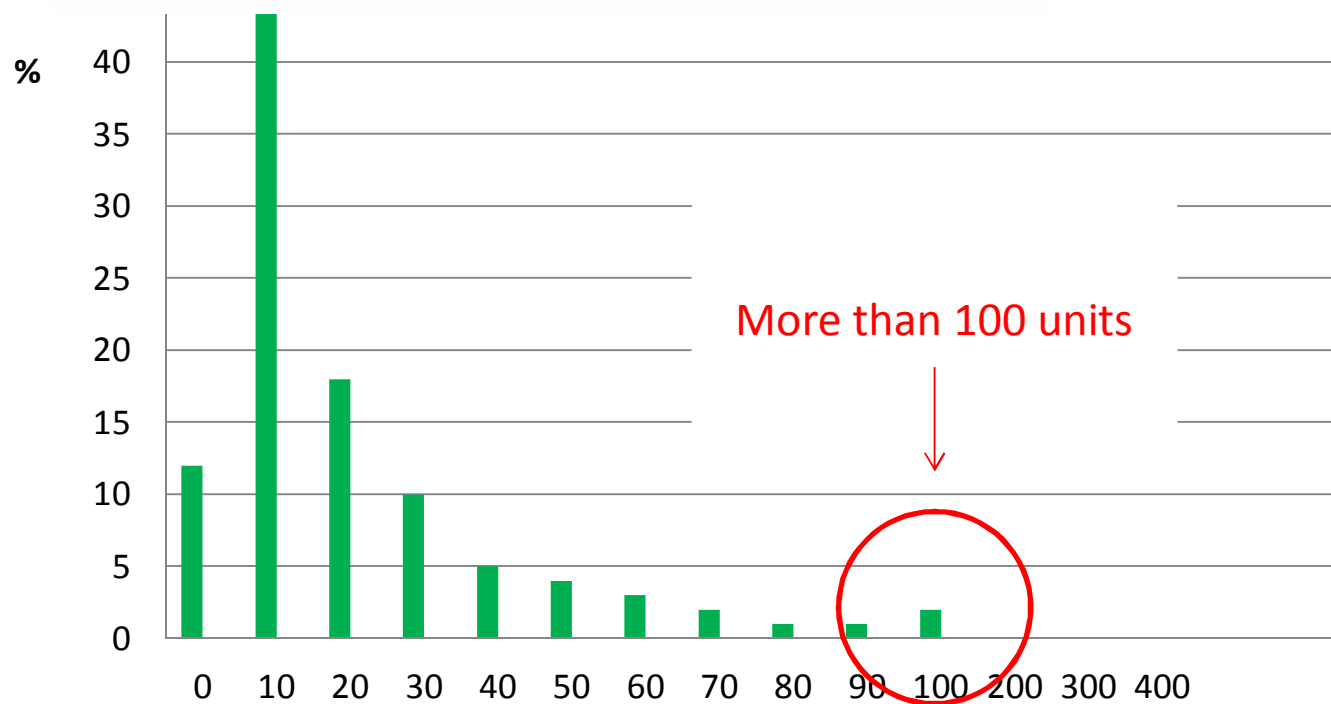




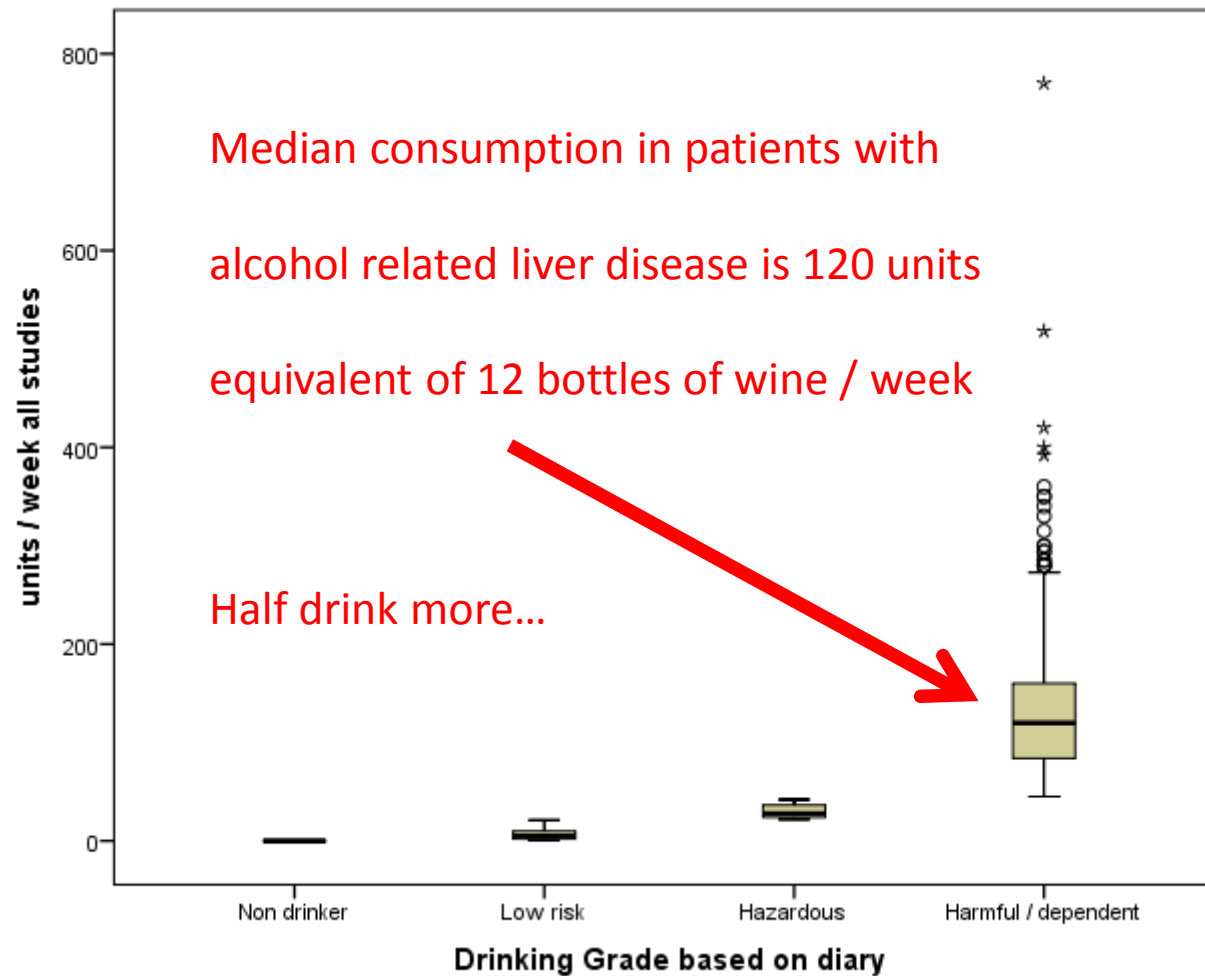
Sully Ledermann 1956

The distribution curve of alcohol consumption is shaped liked a dinosaur,

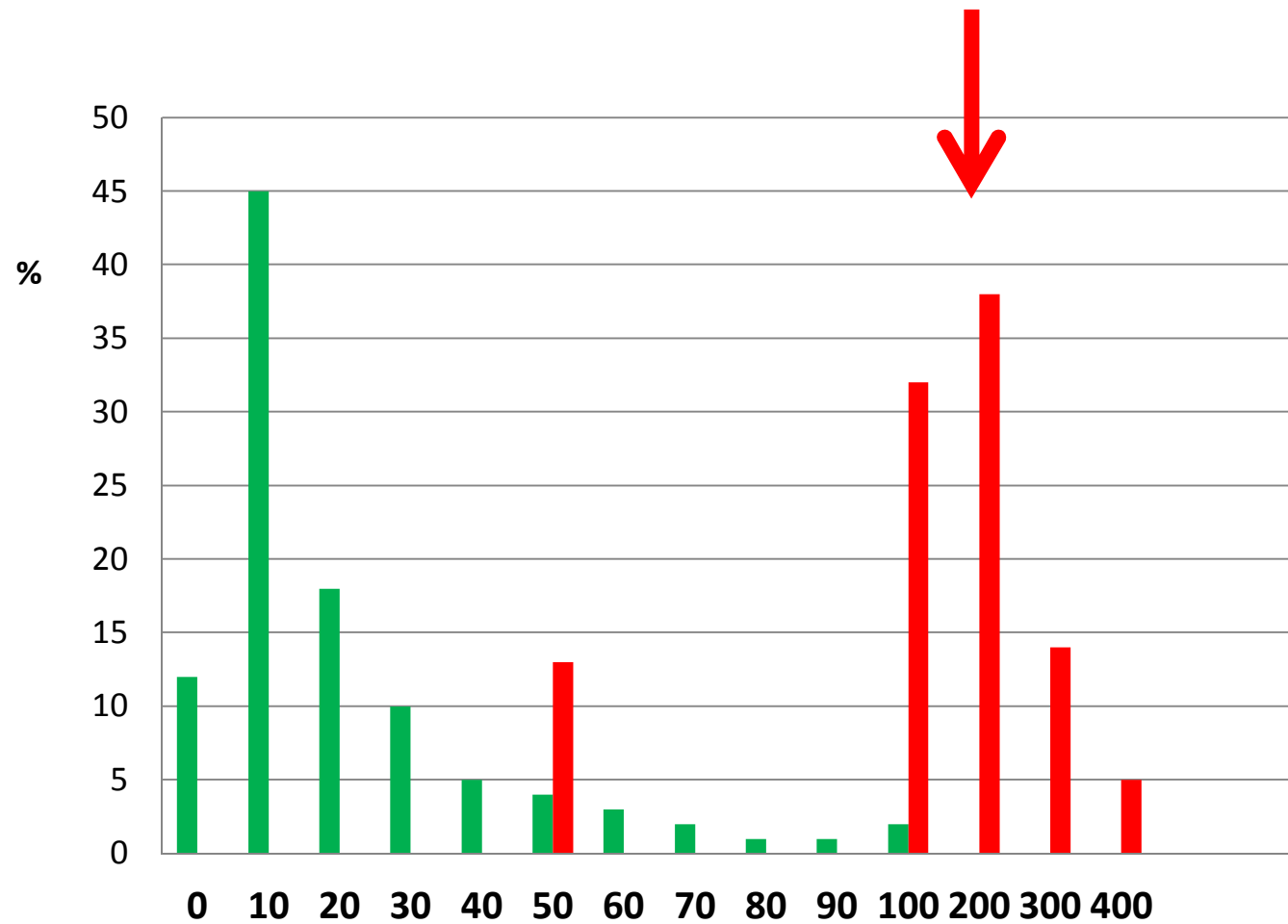


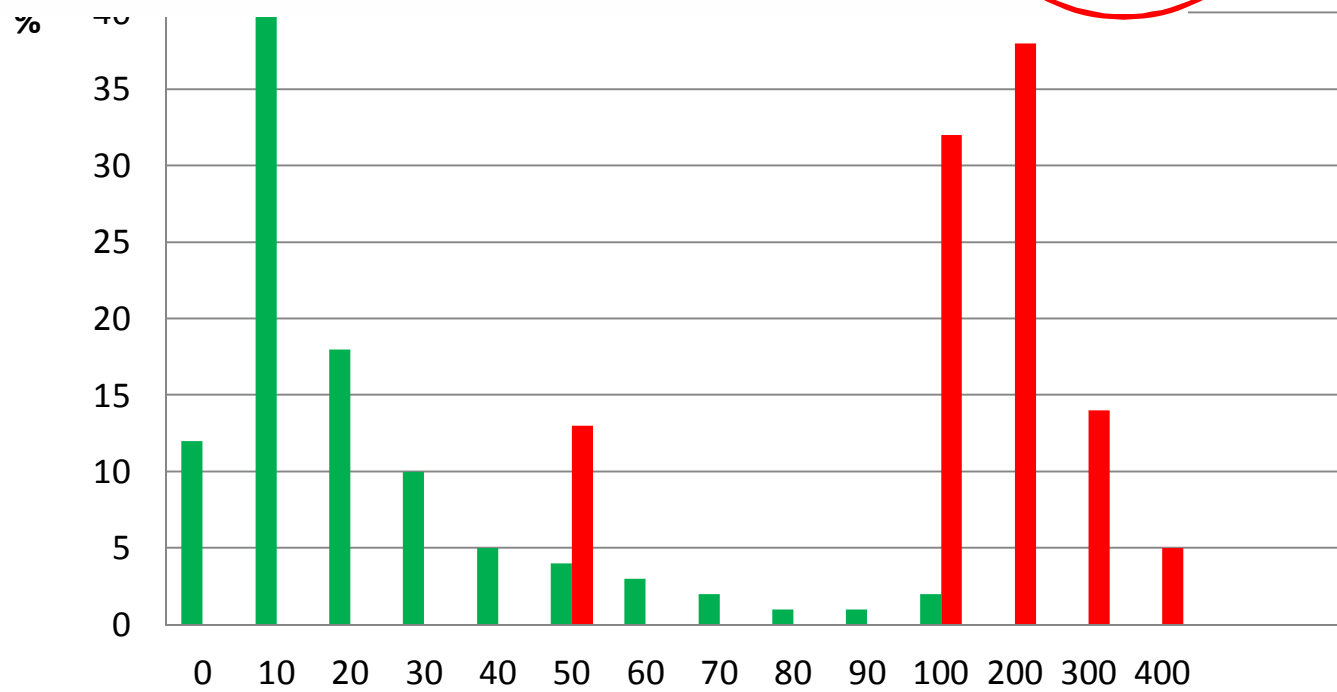
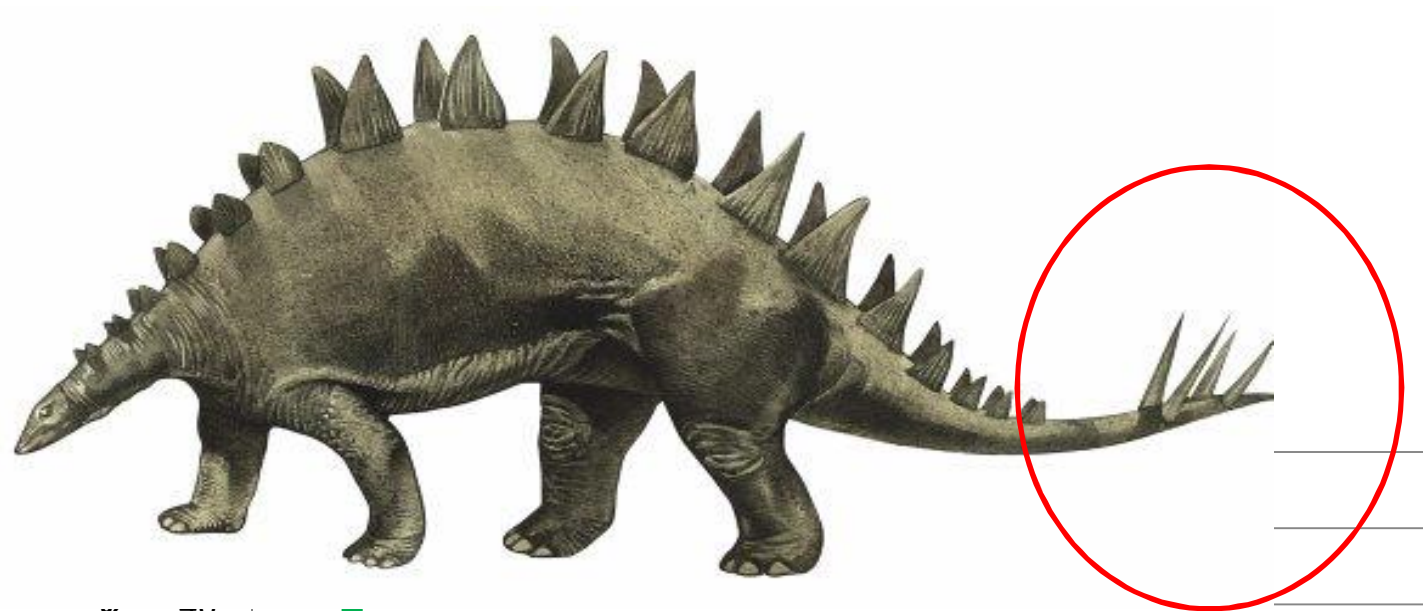


Weekly alcohol consumption in 381 liver patients in Southampton

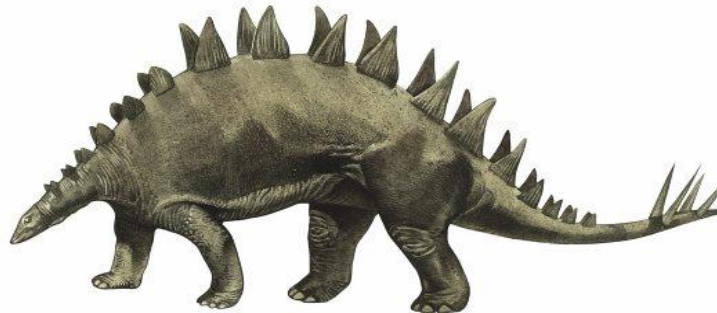
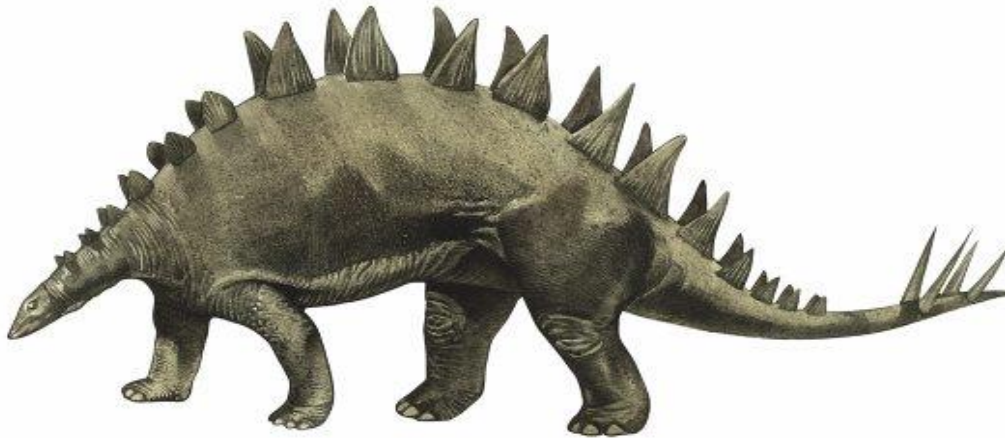


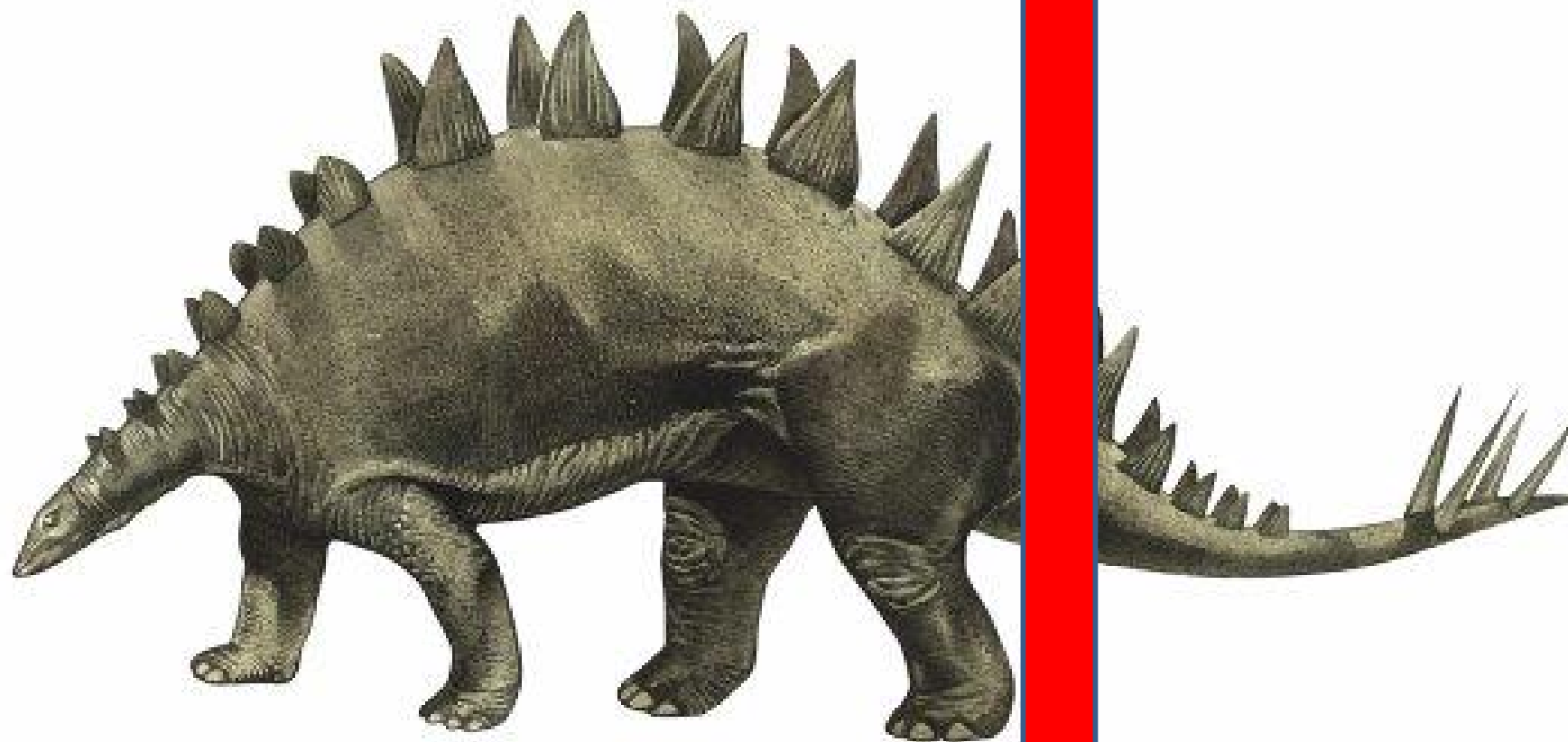
**% distribution of alcohol consumption in
harmful drinkers with alcohol related liver
disease in Southampton**





Controls on price and availability





Minimum Unit Price (MUP)

Retailers are not allowed to sell below a threshold price / unit of alcohol

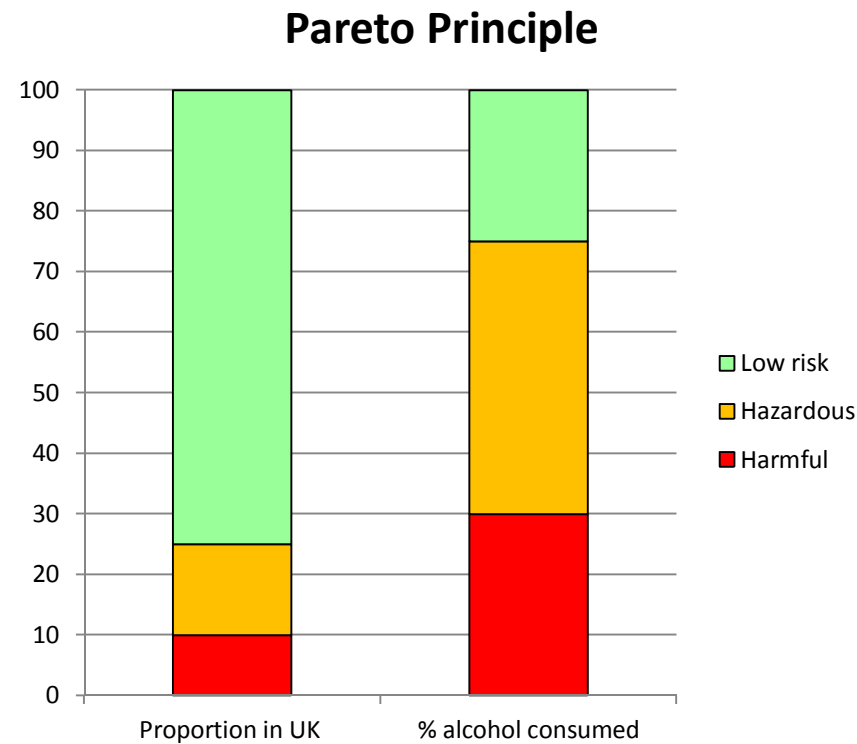
MUP was an SNP manifesto commitment

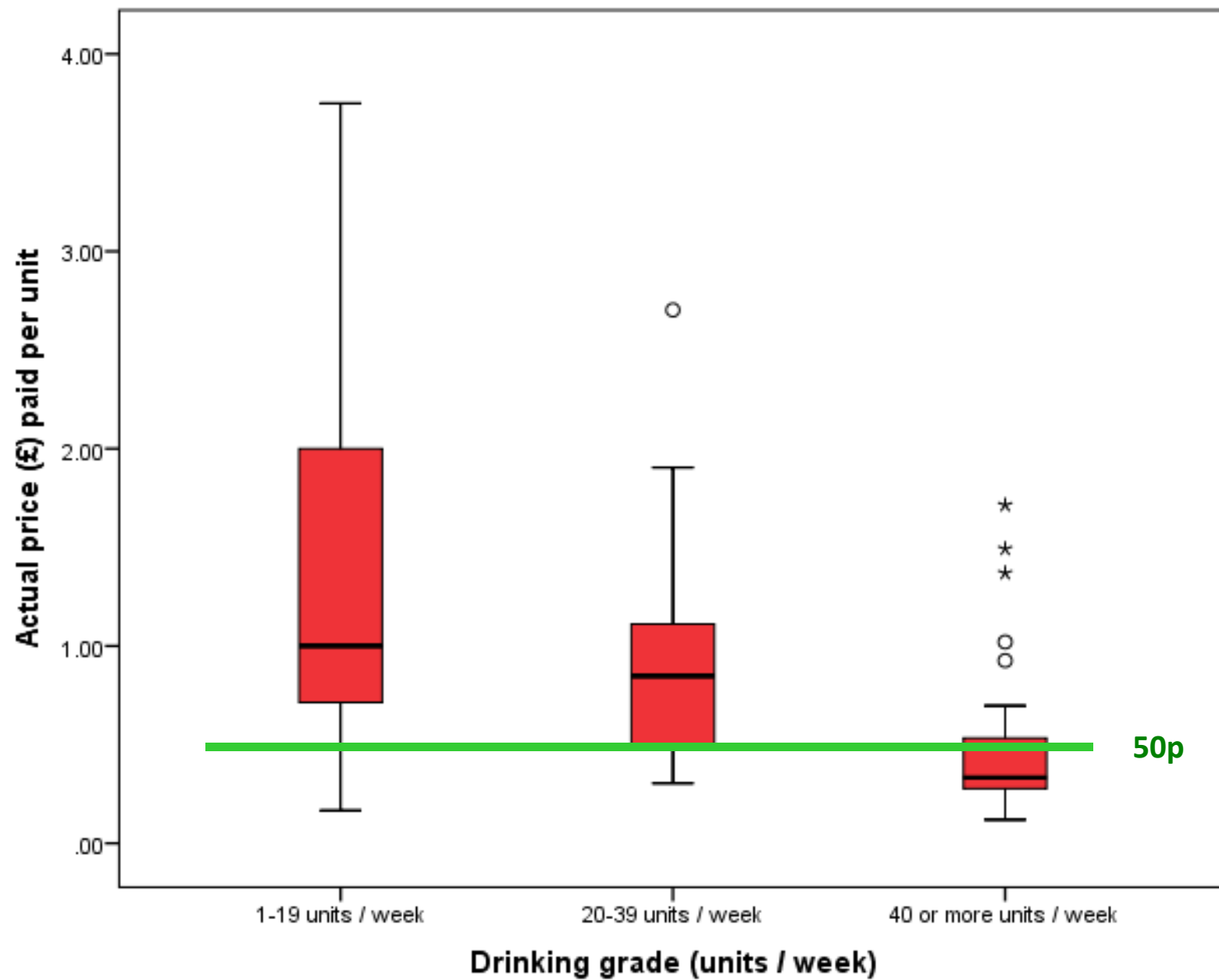
Legislation was passed by the Scottish Government

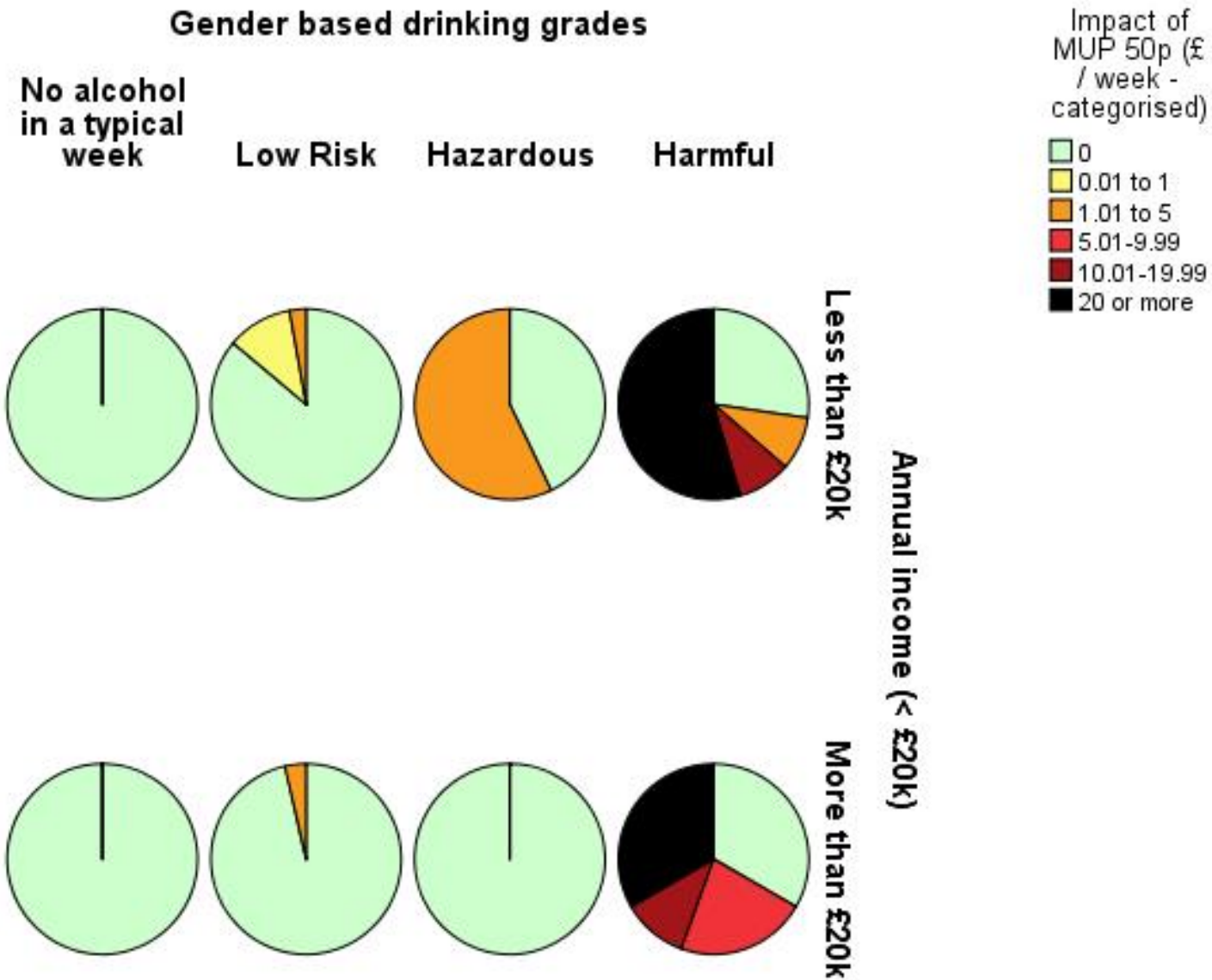
Currently blocked by a legal challenge from spirits manufacturers

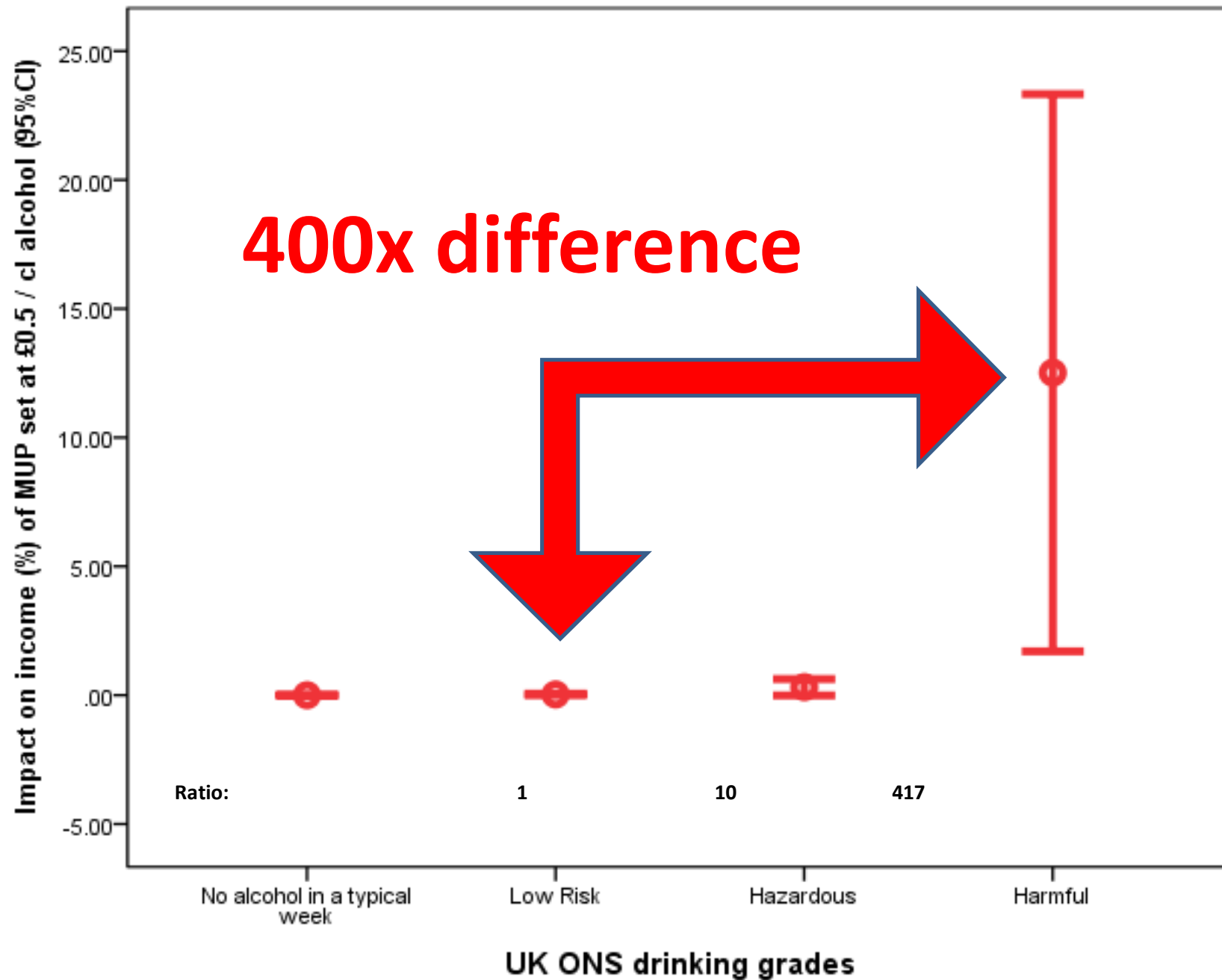
Vilfredo Federico Damaso Pareto (born *Wilfried Fritz Pareto*; Italian: [\[vil fre do pa re to\]](#); 15 July 1848 . 19 August 1923) was an Italian [engineer](#), [sociologist](#), [economist](#), political scientist, and [philosopher](#). He made several important contributions to economics, particularly in the study of income distribution and in the analysis of individuals' choices. He was also responsible for popularising the use of the term "[elite](#)" in social analysis.

He introduced the concept of [Pareto efficiency](#) and helped develop the field of [microeconomics](#). He was also the first to discover that [income](#) follows a [Pareto distribution](#), which is a [power law](#) probability distribution. The [Pareto principle](#) was named after him and built on observations of his such as that 80% of the land in Italy was owned by 20% of the population. He also contributed to the fields of [sociology](#) and [mathematics](#).

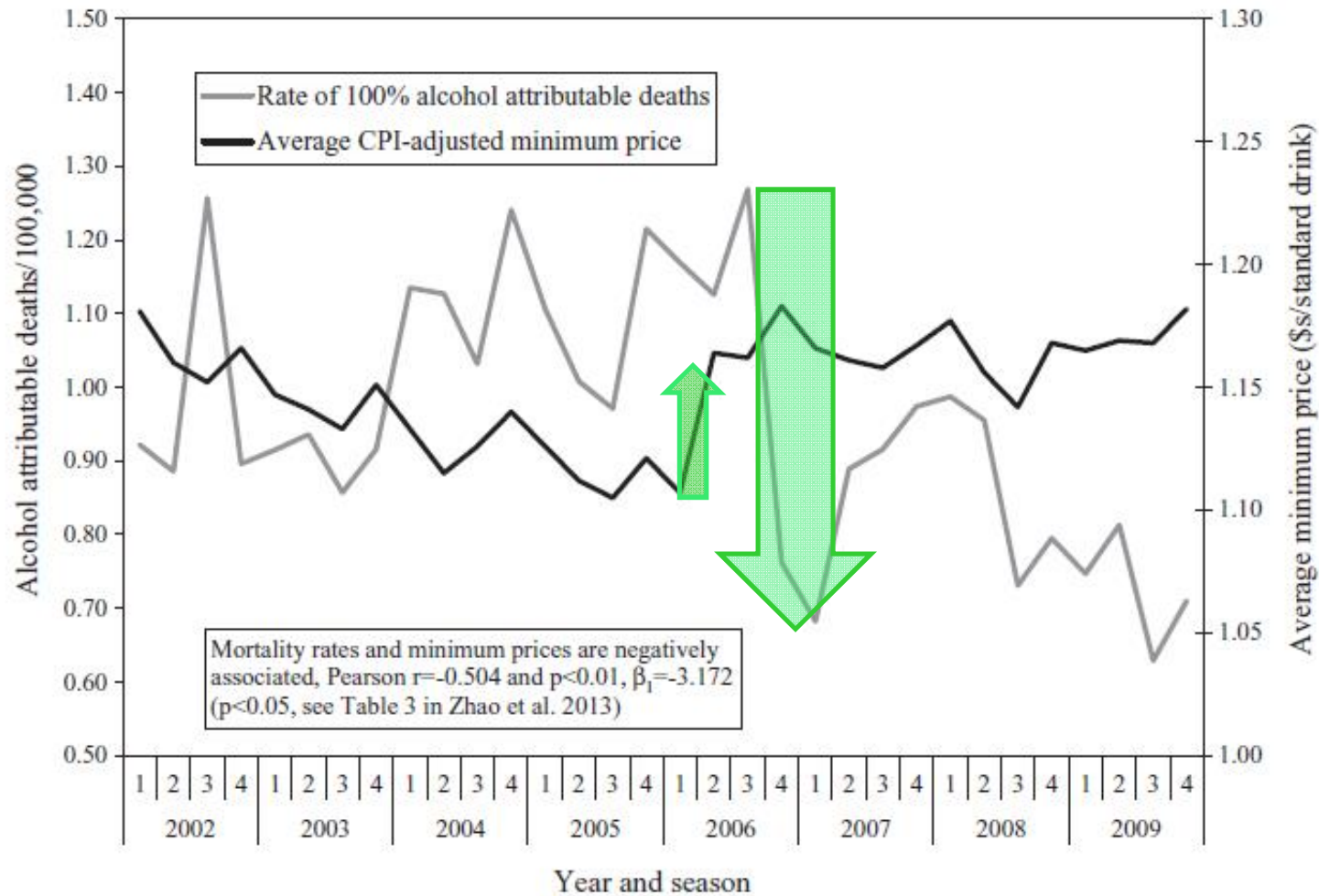




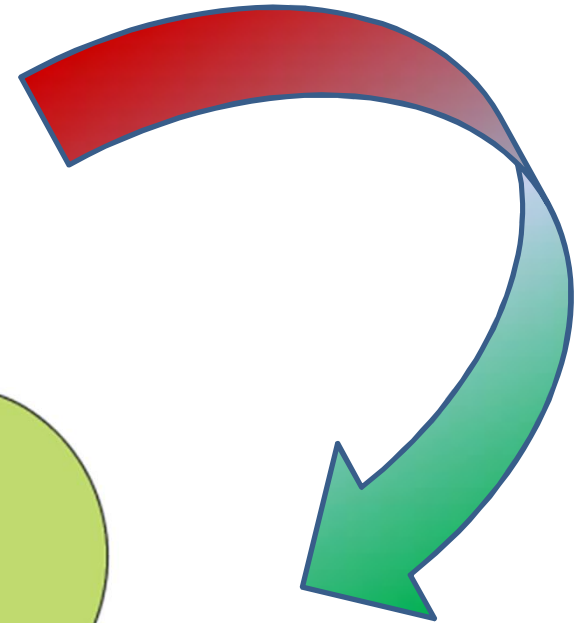
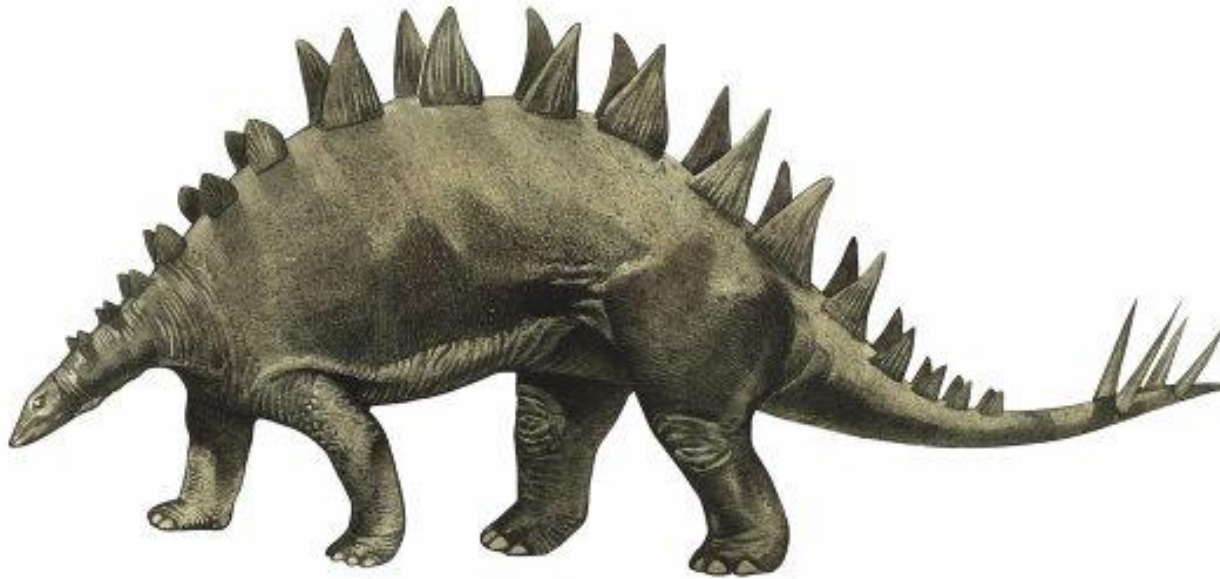




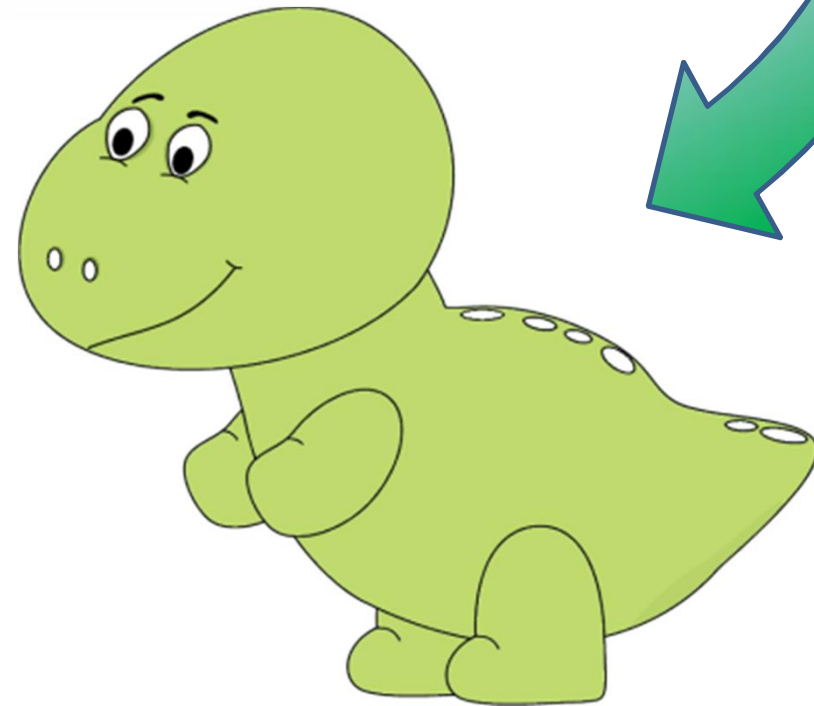
32% fall in directly attributable alcohol death rates



Deaths fall within a year

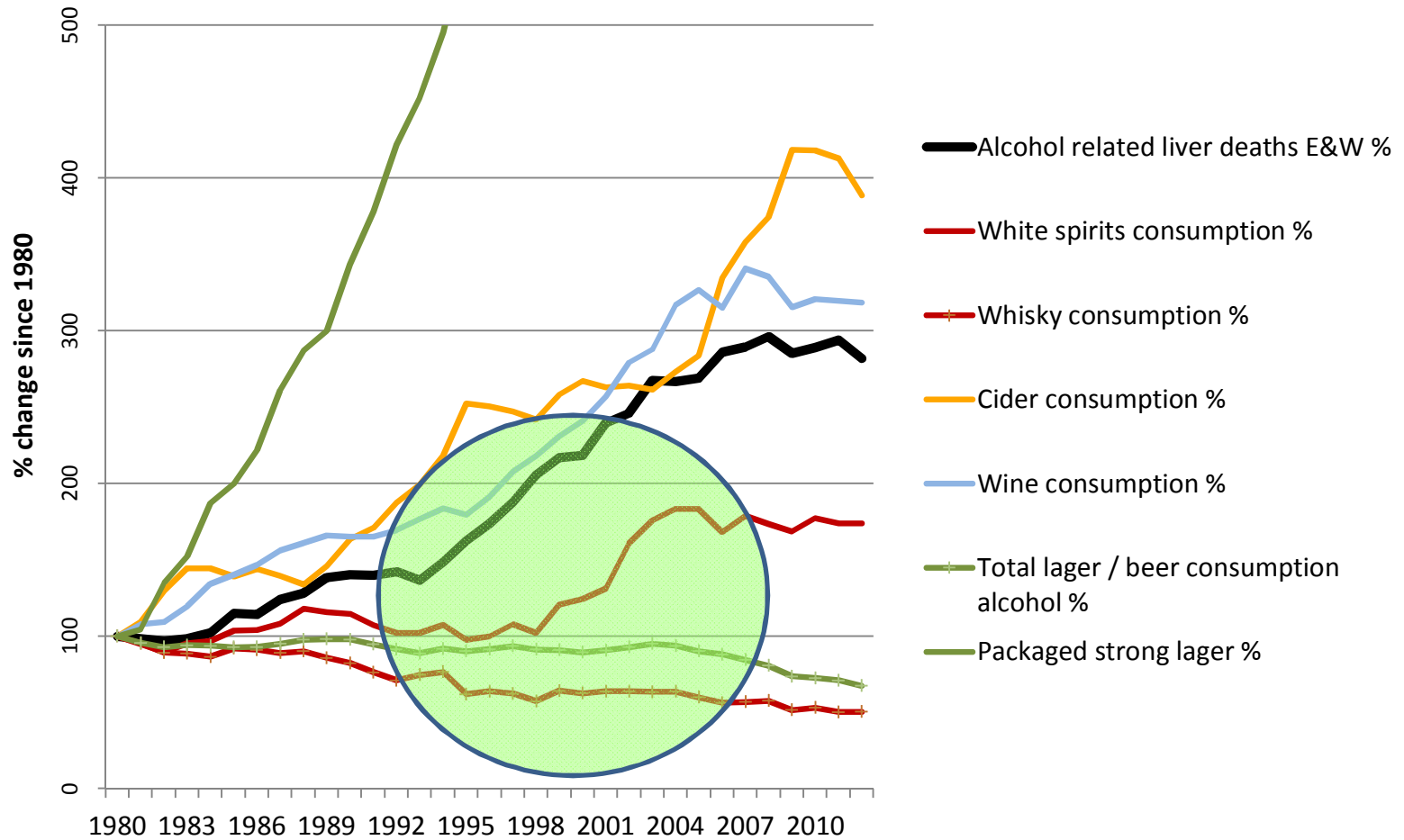


MUP changes the shape
of the dinosaur

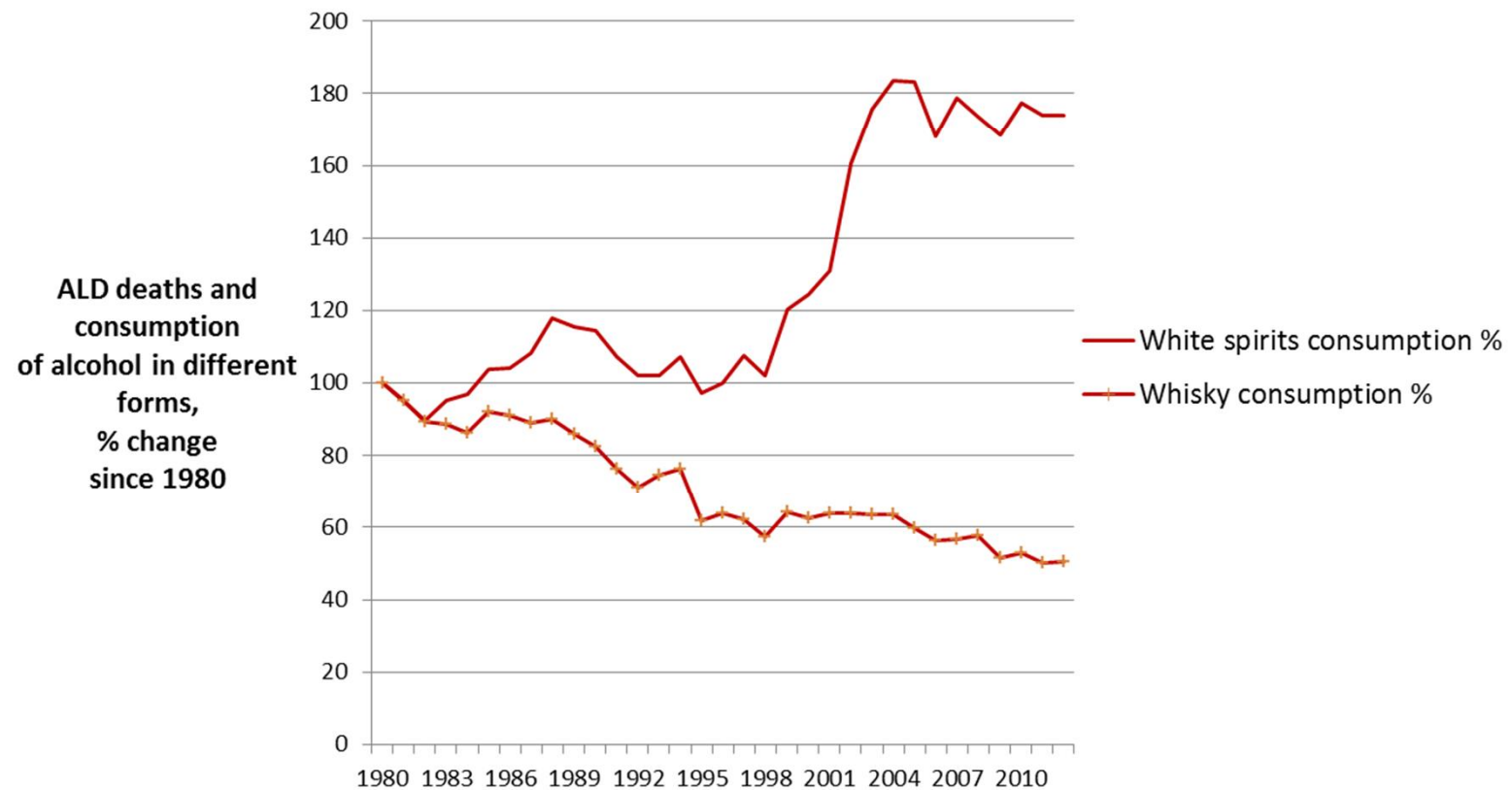


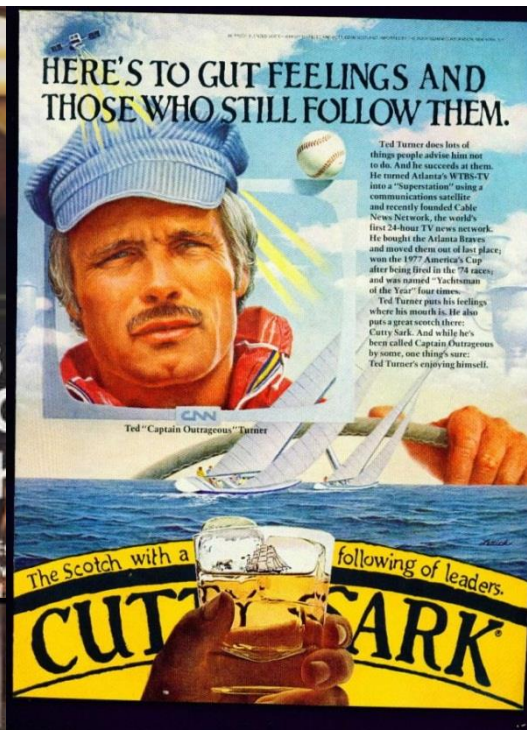
Stop

Trends in mortality from alcohol related liver disease in England and Wales , consumption of spirits, wine, beer and cider, and changes in duty



**Trends in mortality from alcohol related liver disease in England and Wales ,
consumption of spirits, wine, beer and cider, and changes in duty**

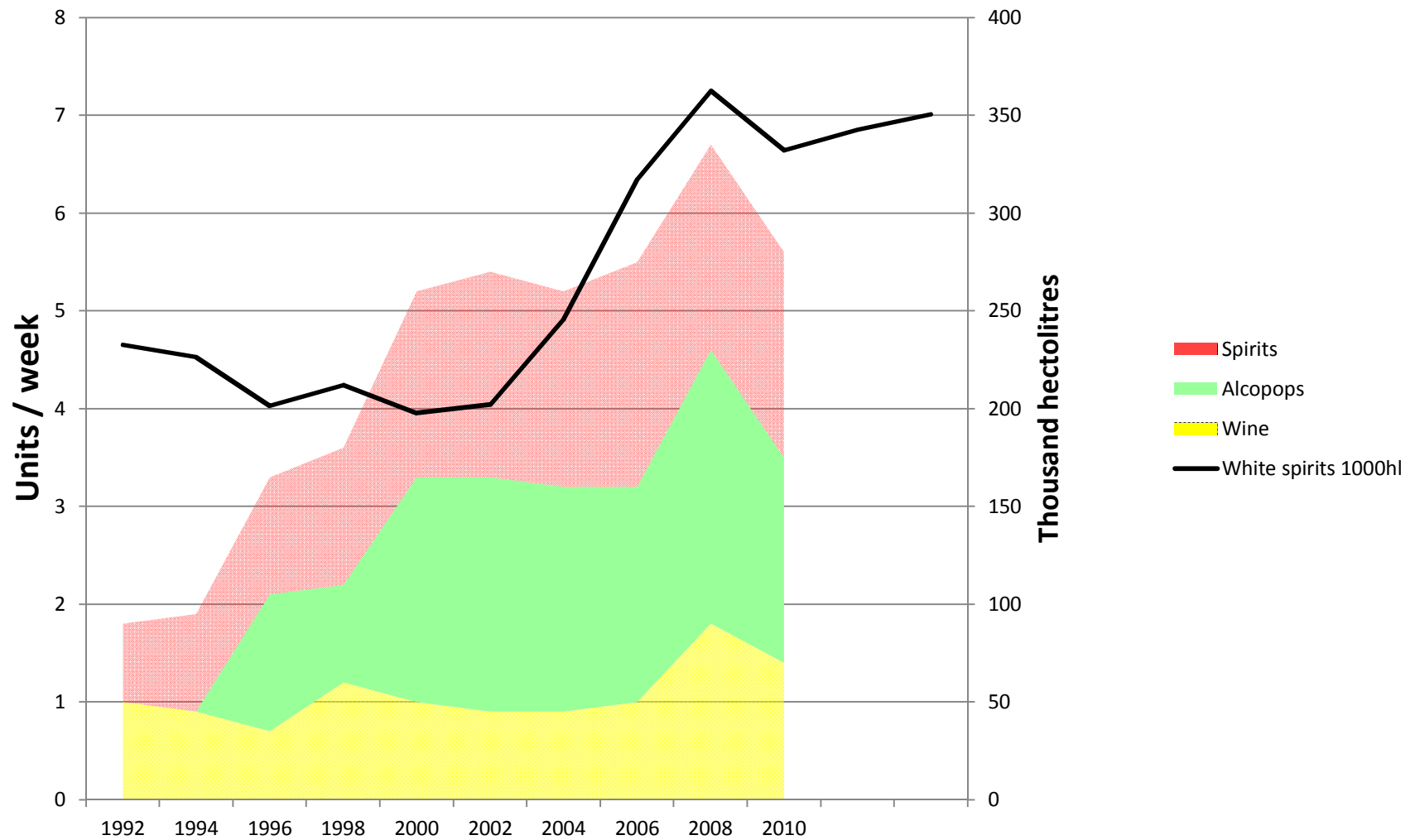




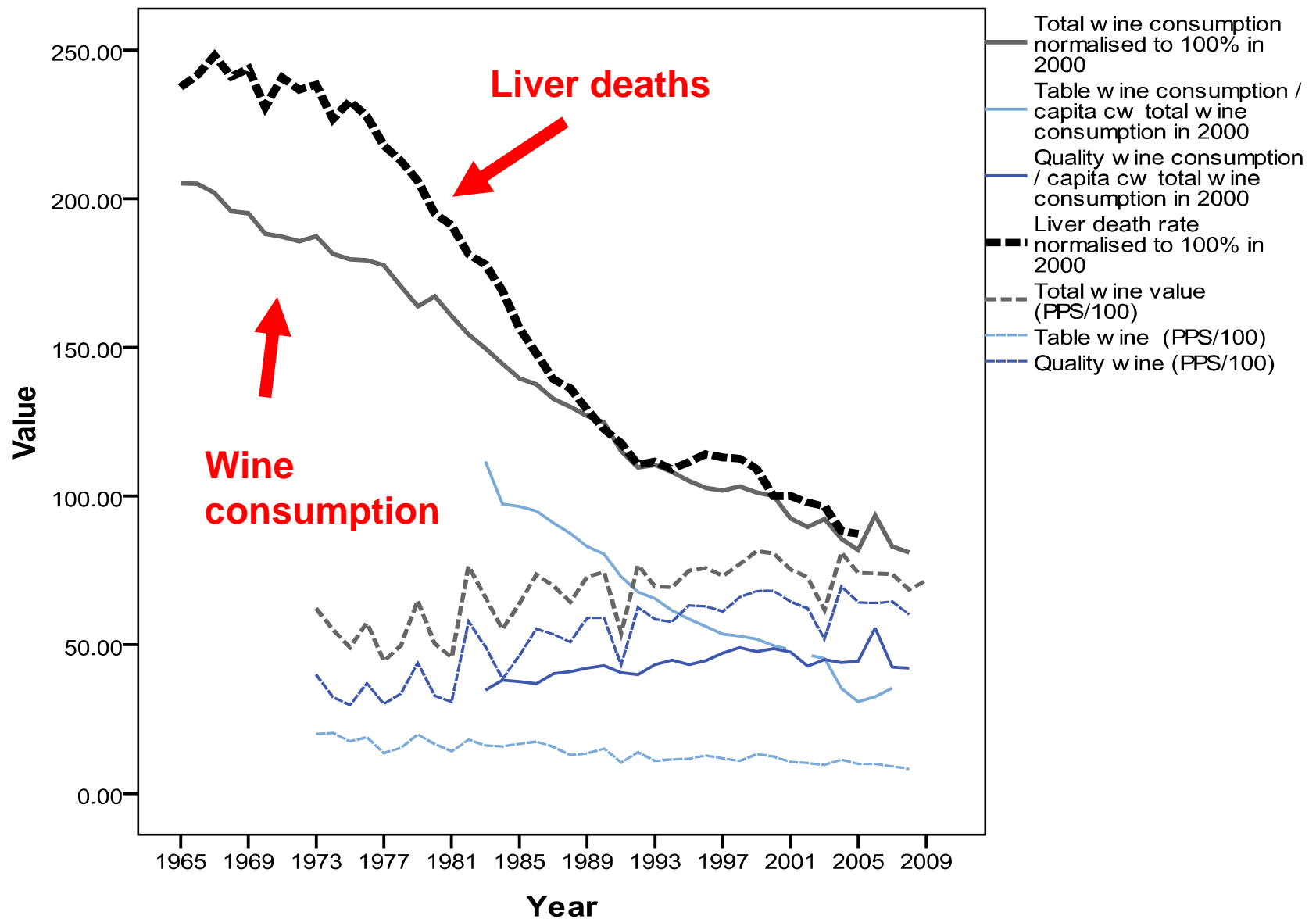
<http://www.vintageadbrowser.com/drinks-ads-1980s/2>

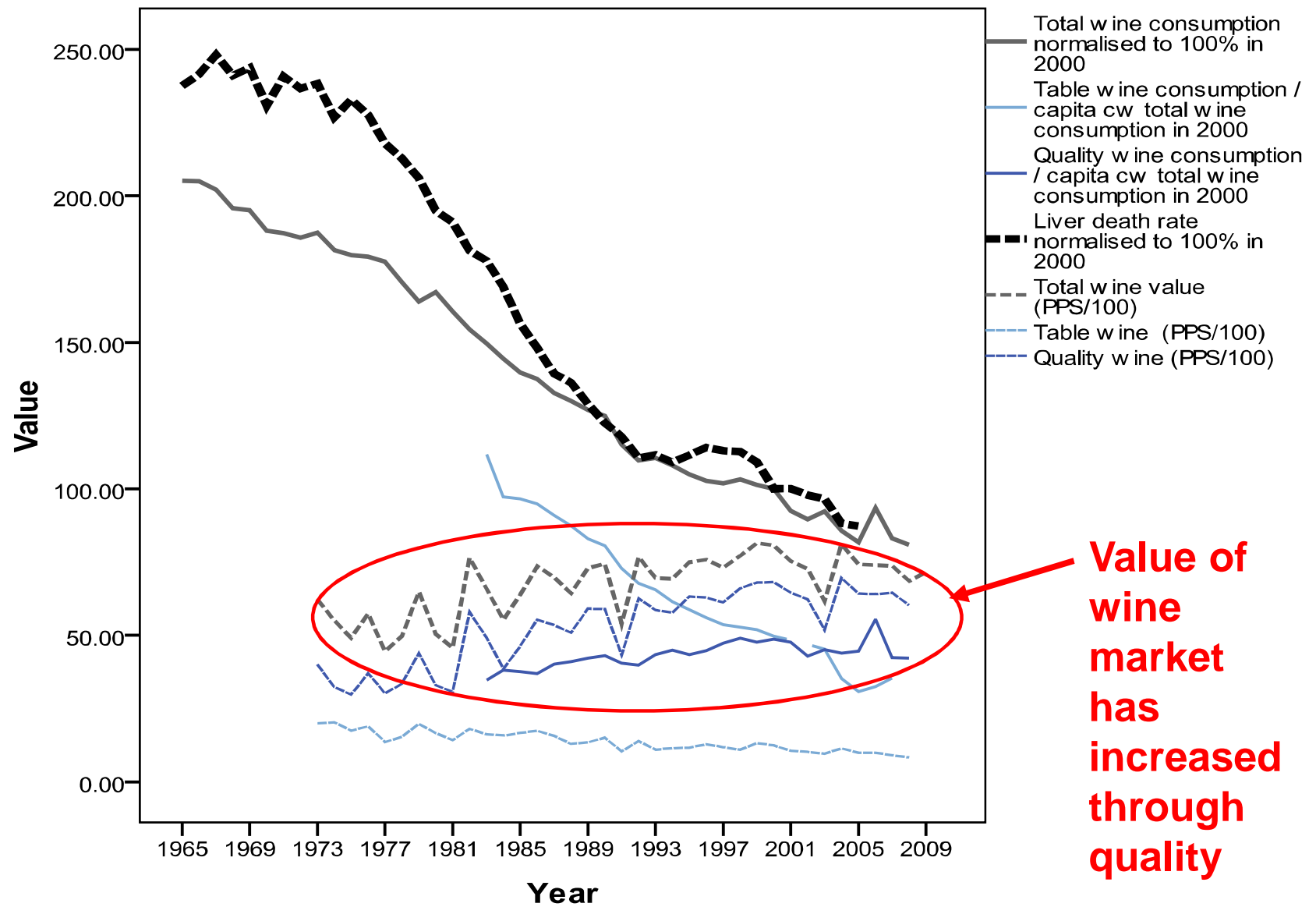


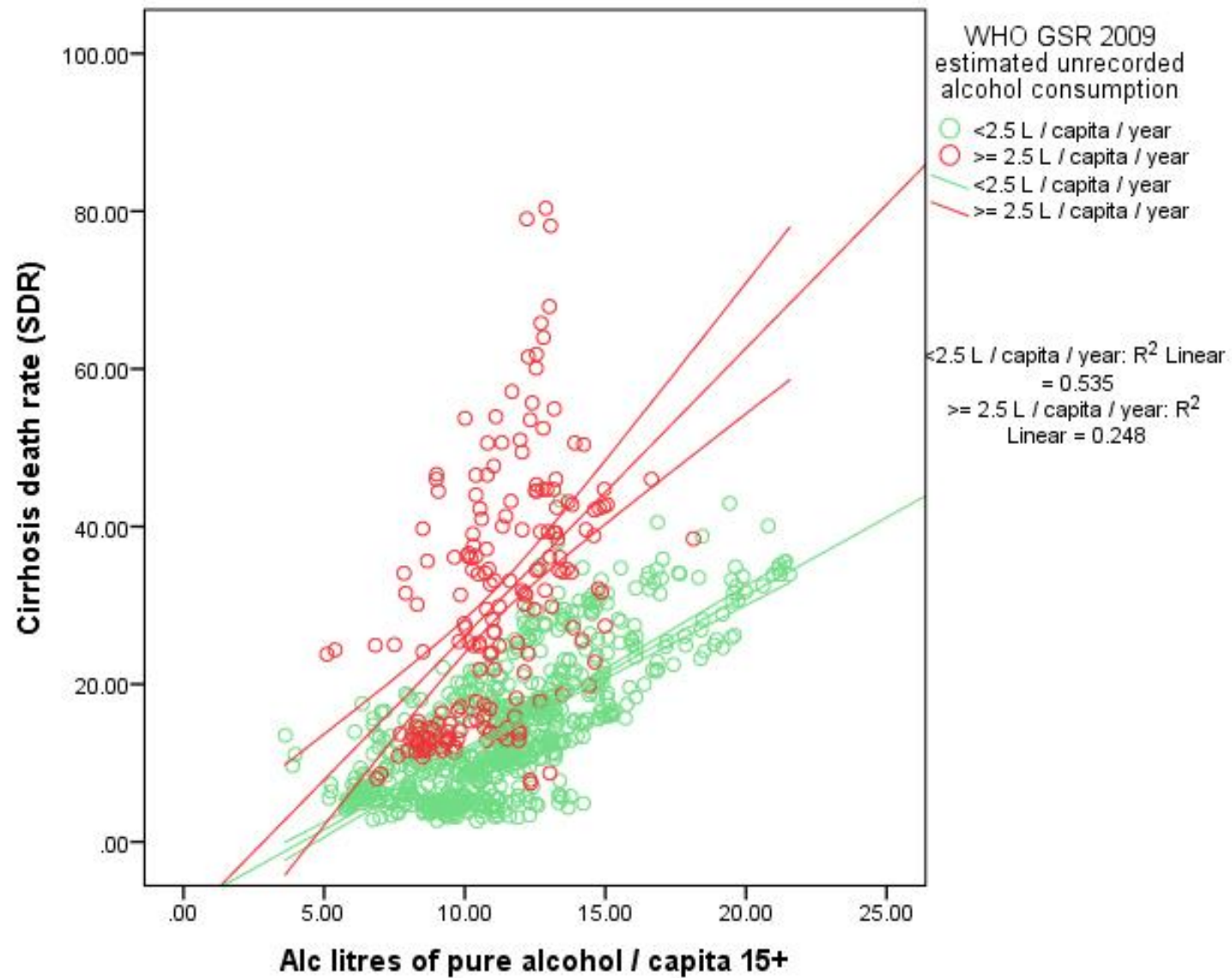
Consumption of alcopops, spirits and wine by
10-15 year old schoolchildren in England and
total consumption of white spirits



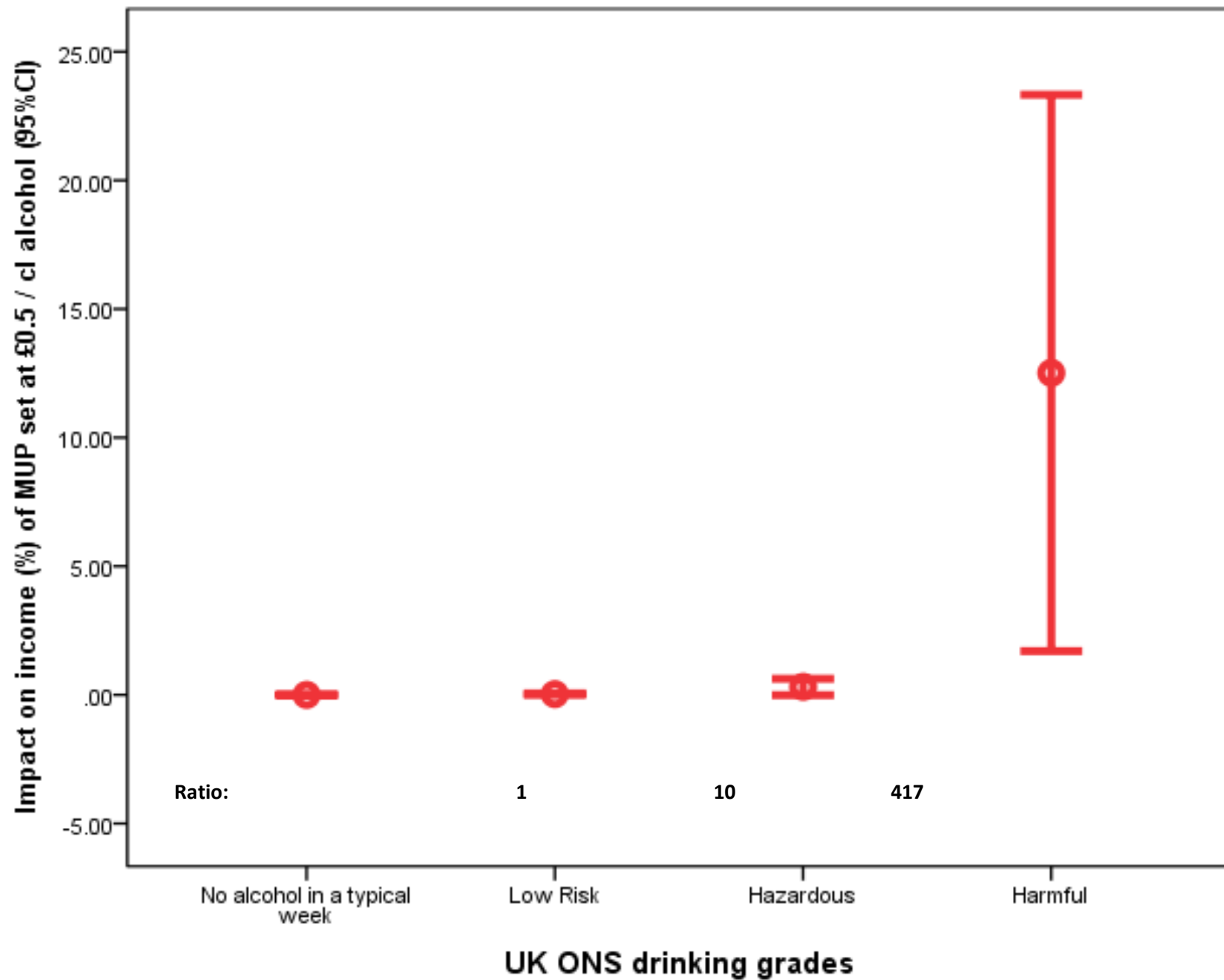


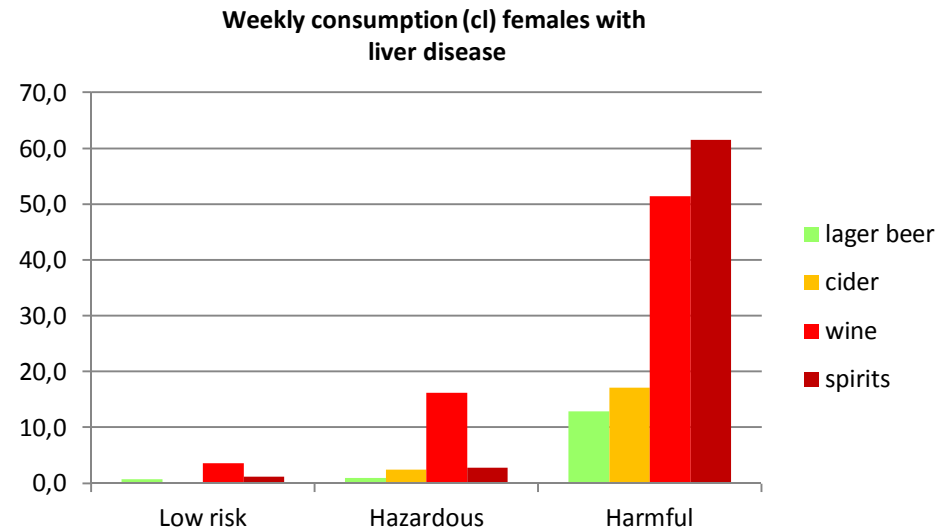
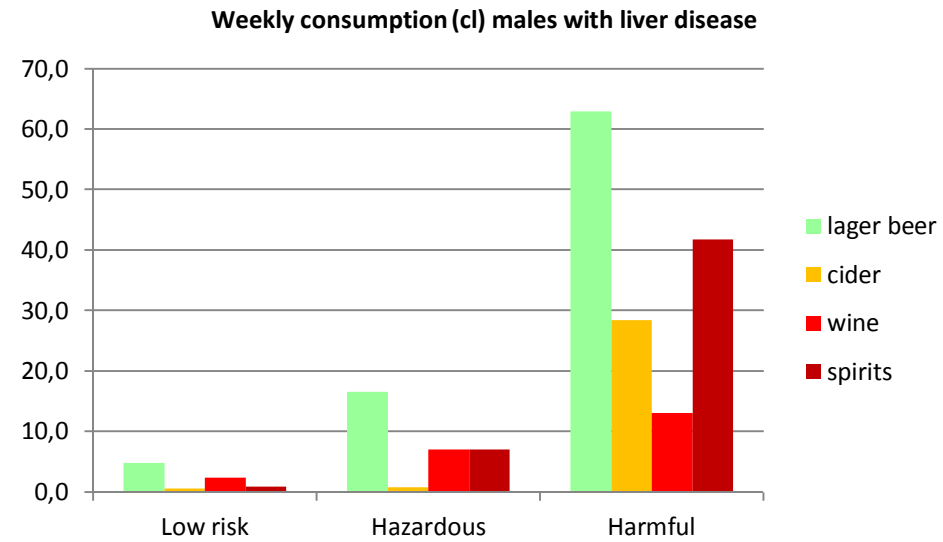




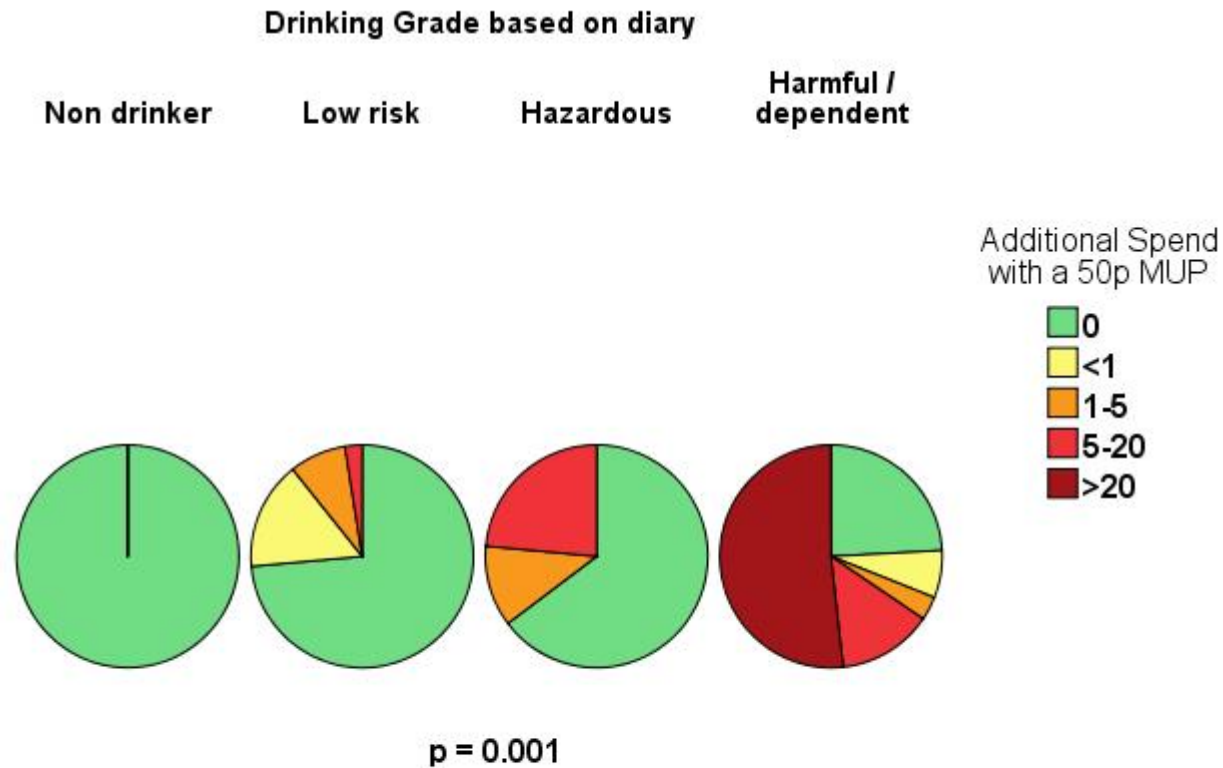


**Half of the variation in
EU liver death rates
over time corresponds
to population level
alcohol consumption**

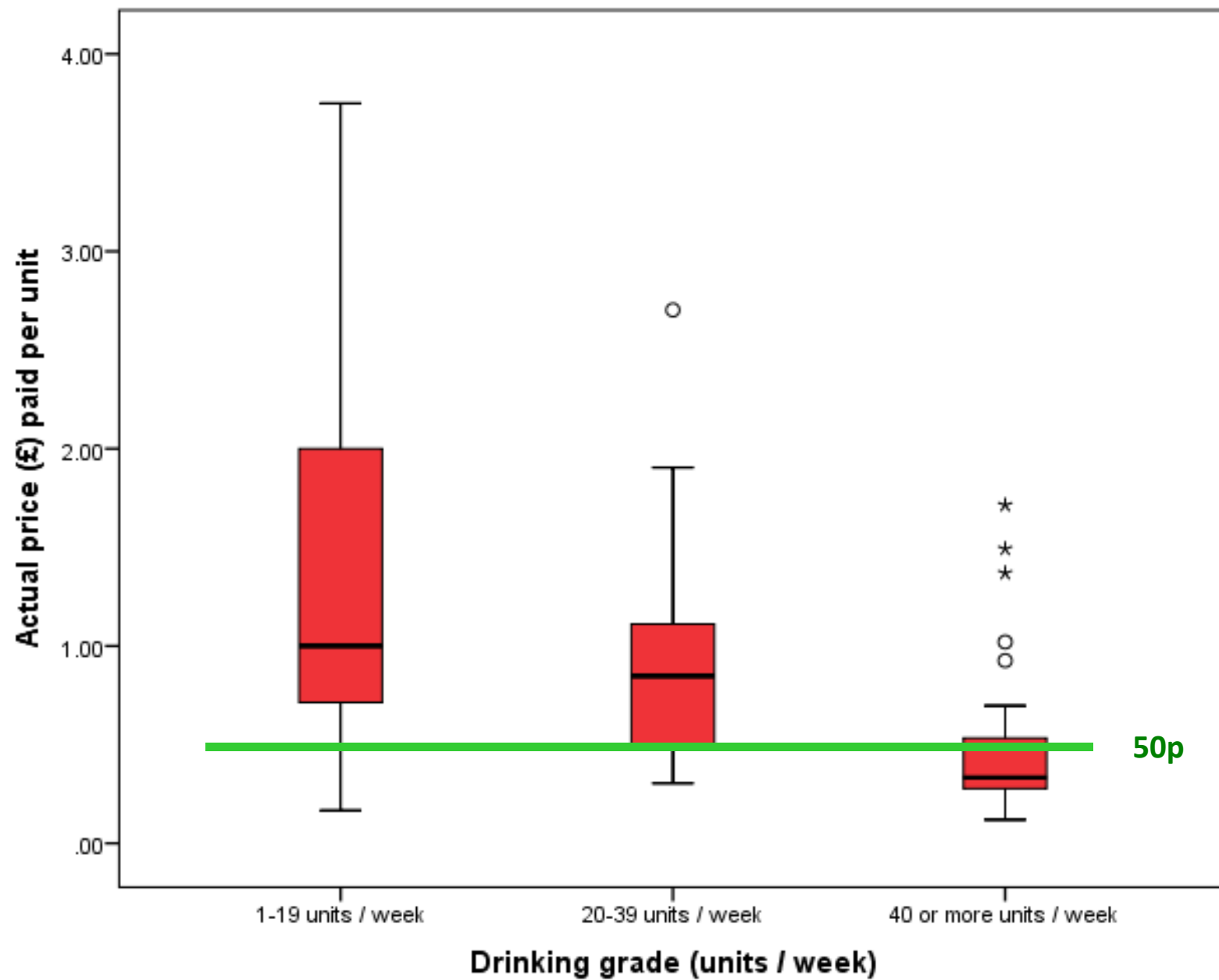




The actual impact of MUP on patients with liver disease (n= 143)



Minimum unit price is an exquisitely targeted measure



LOW

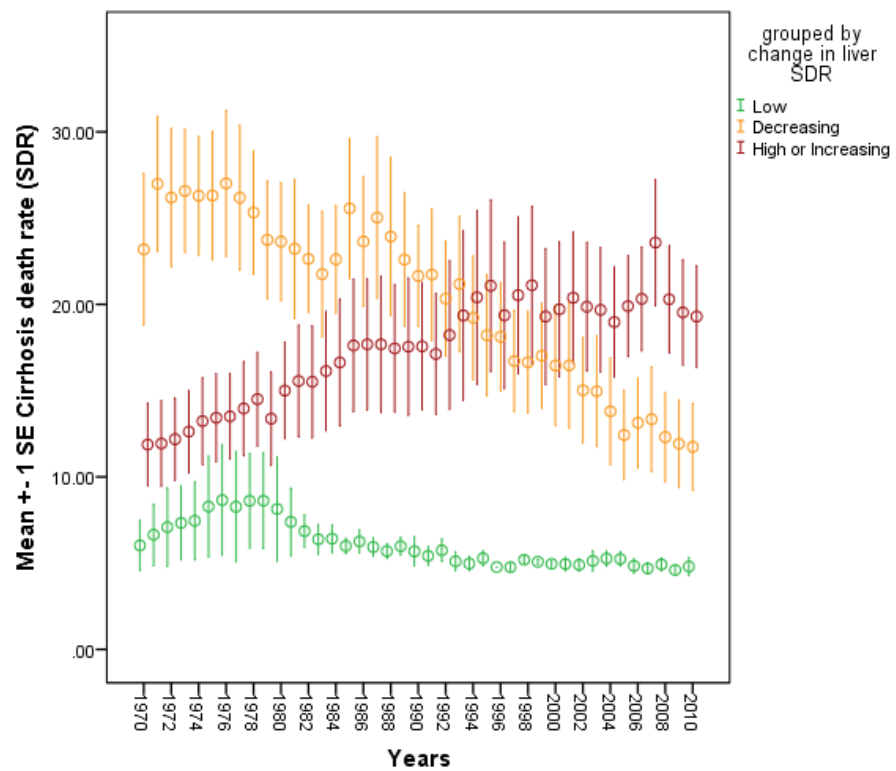
Cyprus, Netherlands,
Norway and Sweden

Decreasing

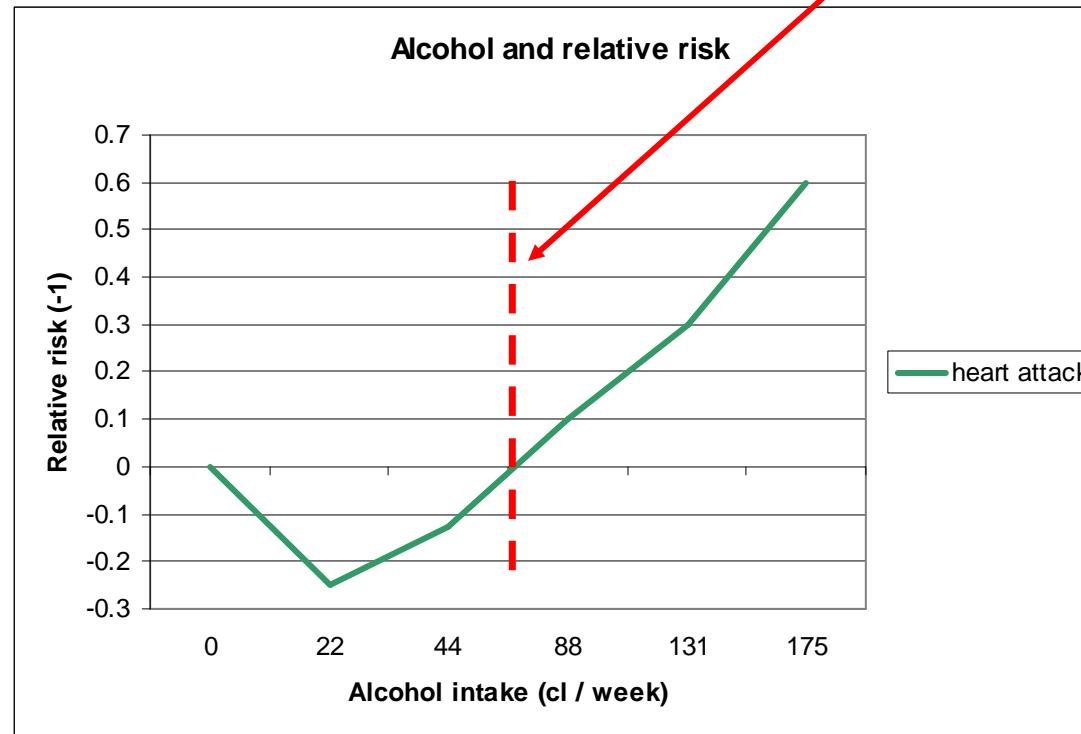
France, Greece, Italy, Luxembourg,
Malta, Portugal, Slovakia, Slovenia and
Spain

High or increasing

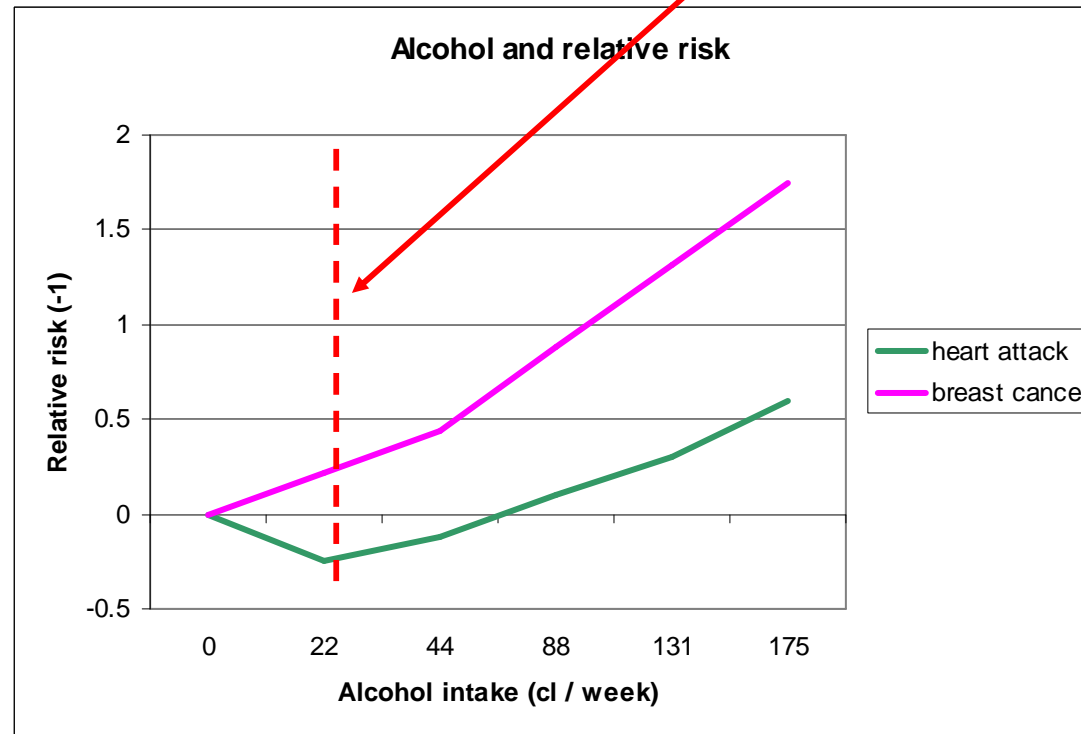
Austria, Belgium, Bulgaria, Czech
Republic, Denmark, Estonia, Finland,
Germany, Hungary, Ireland, Latvia,
Lithuania, Poland, Romania and United
Kingdom



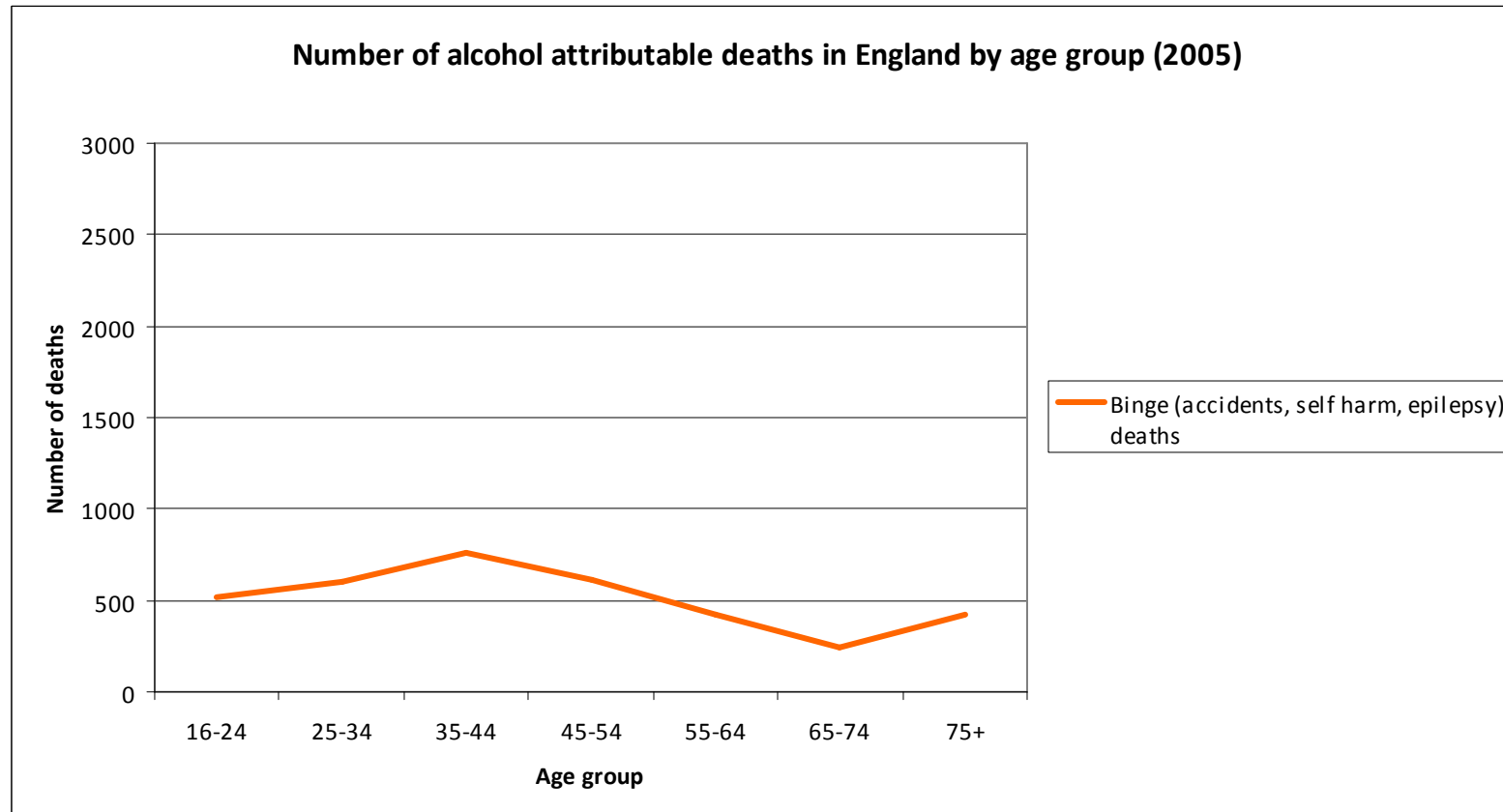
Heart attack
60cl / week = 6 bottles wine



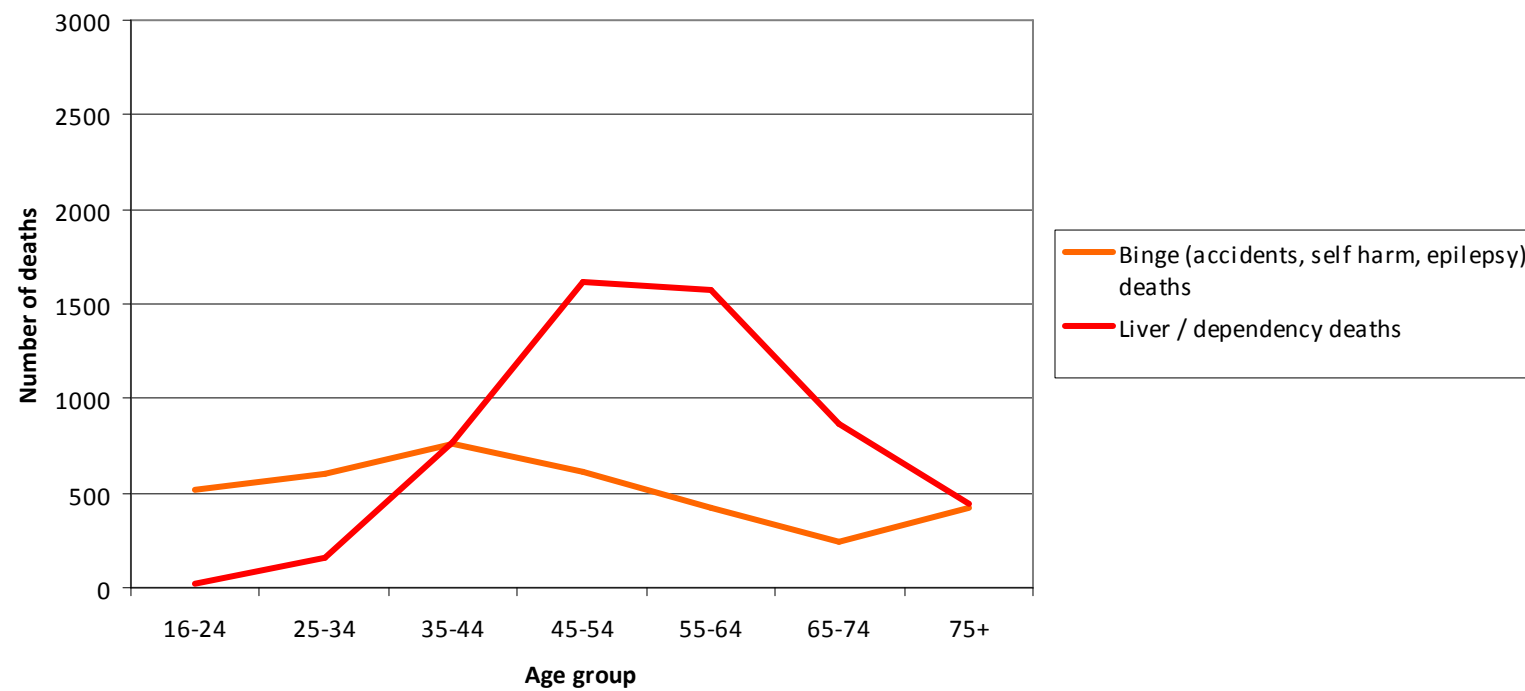
Heart attack + breast cancer
20cl / week = 2 bottles wine



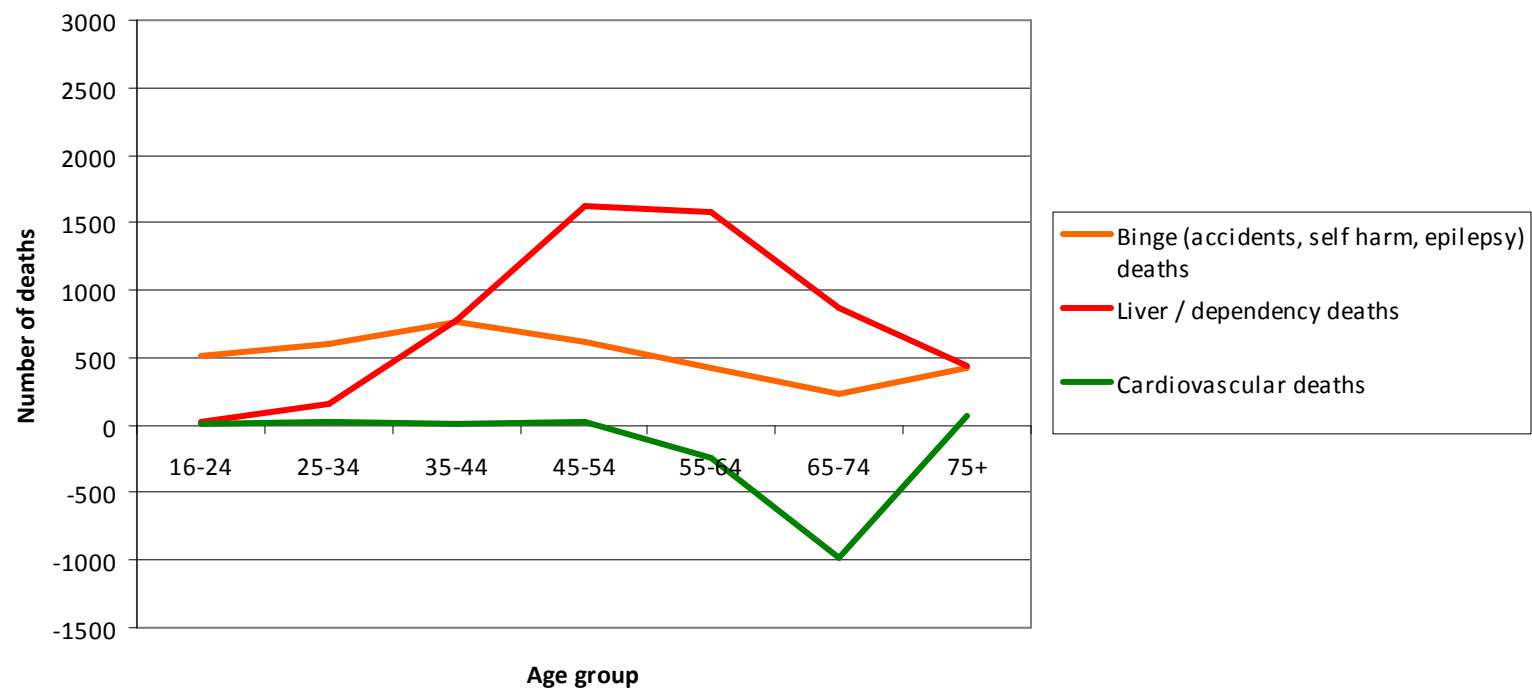
Absolute risk = relative risk x prevalence

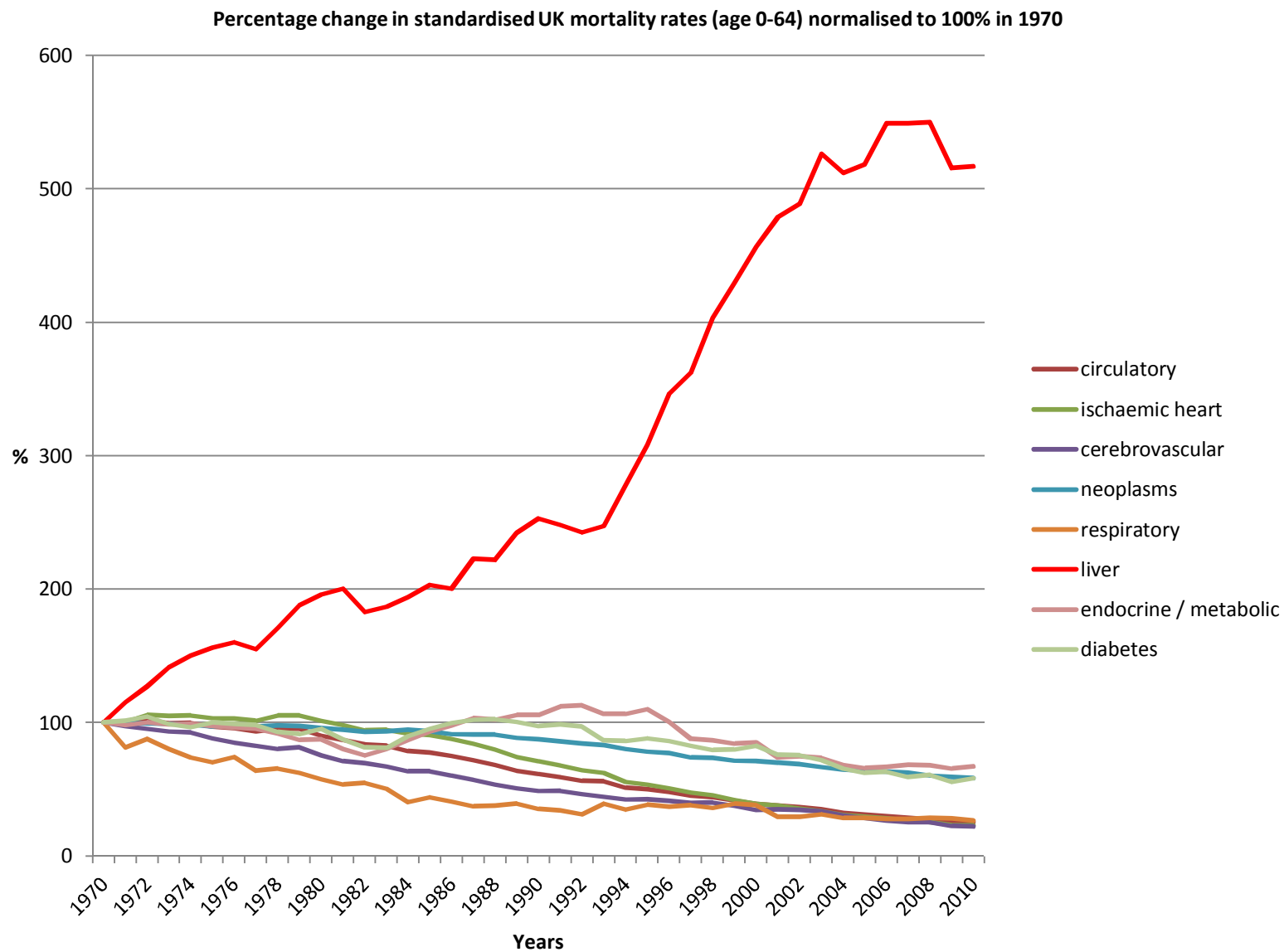


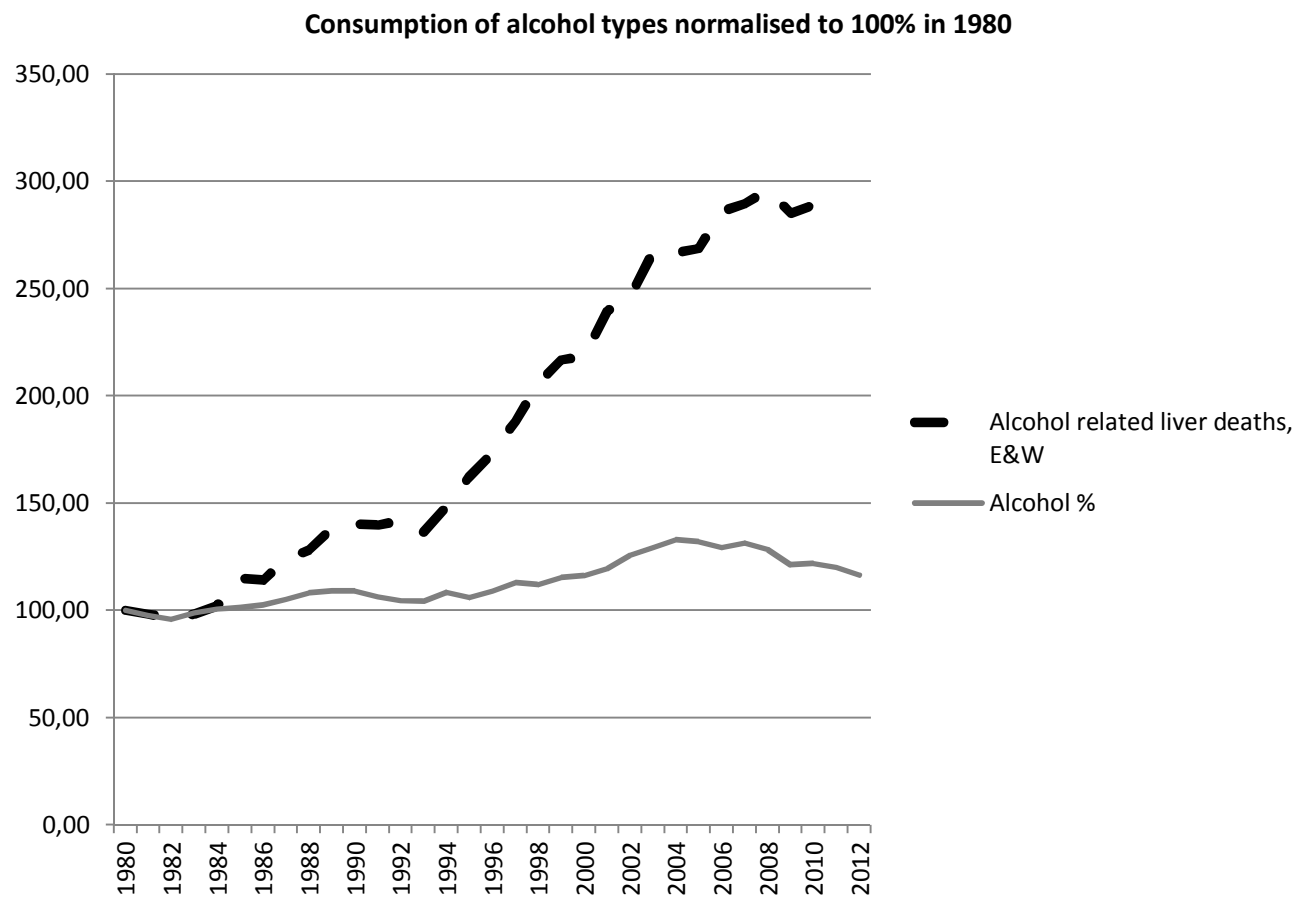
Number of alcohol attributable deaths in England by age group (2005)



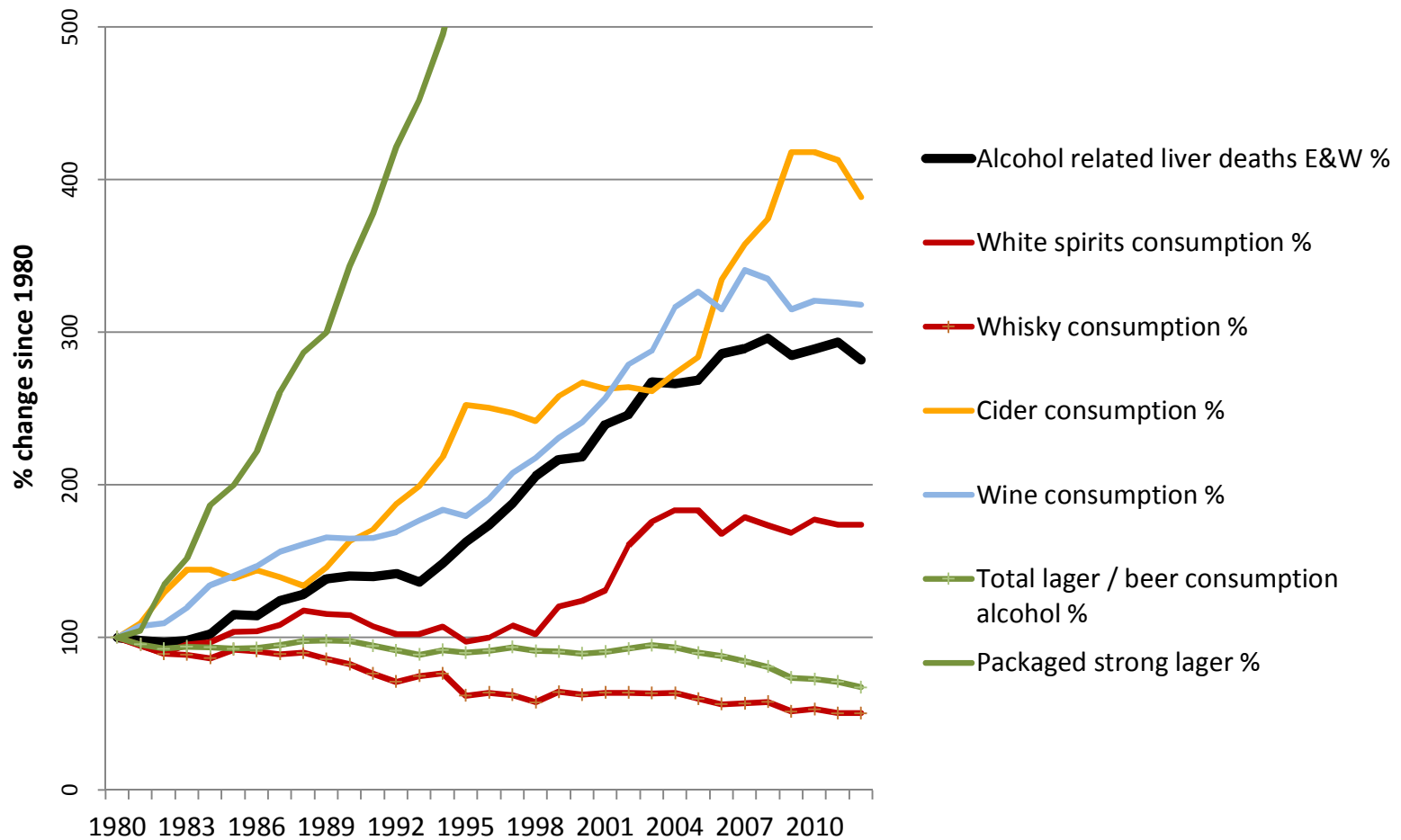
Number of alcohol attributable deaths in England by age group (2005)

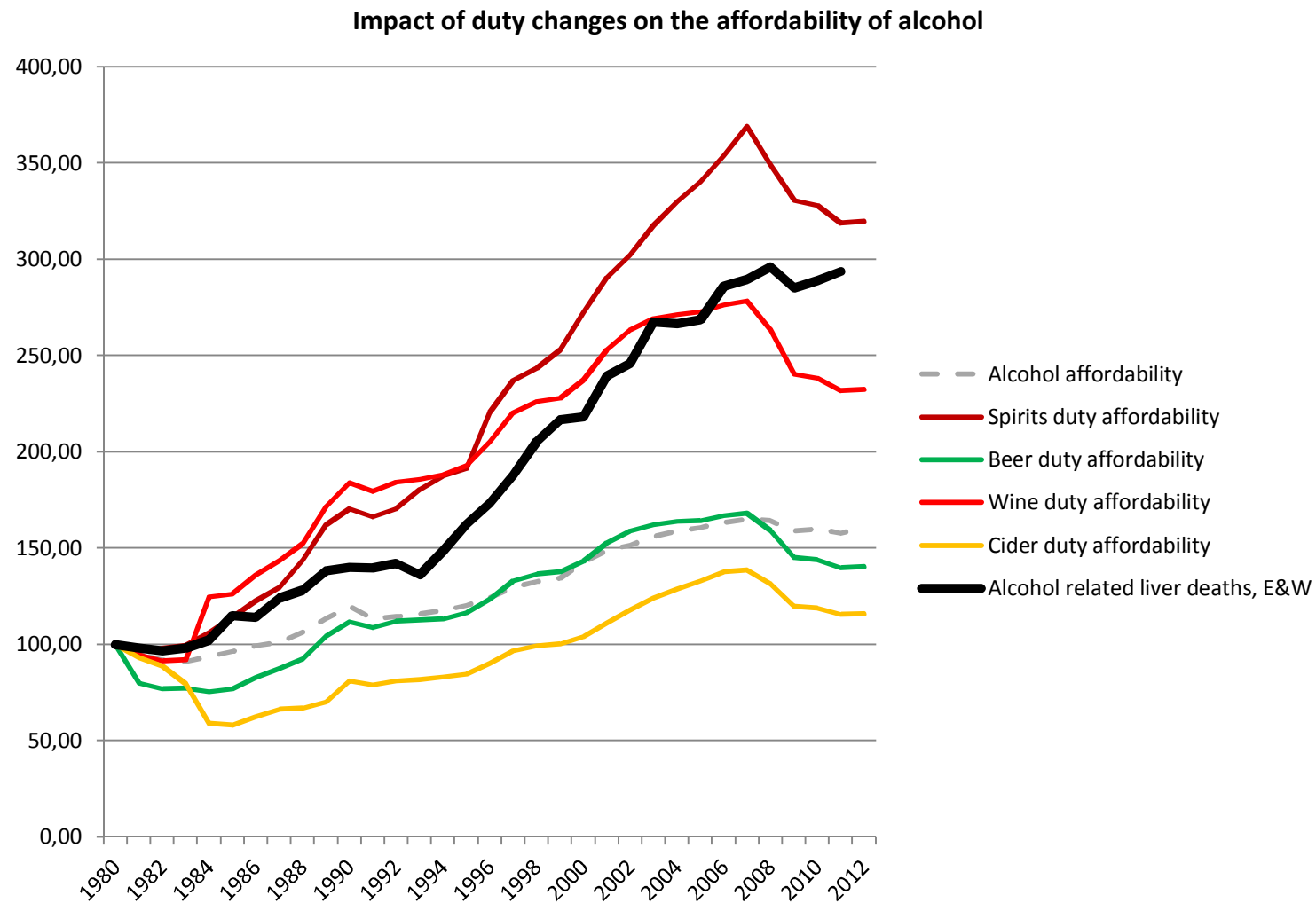






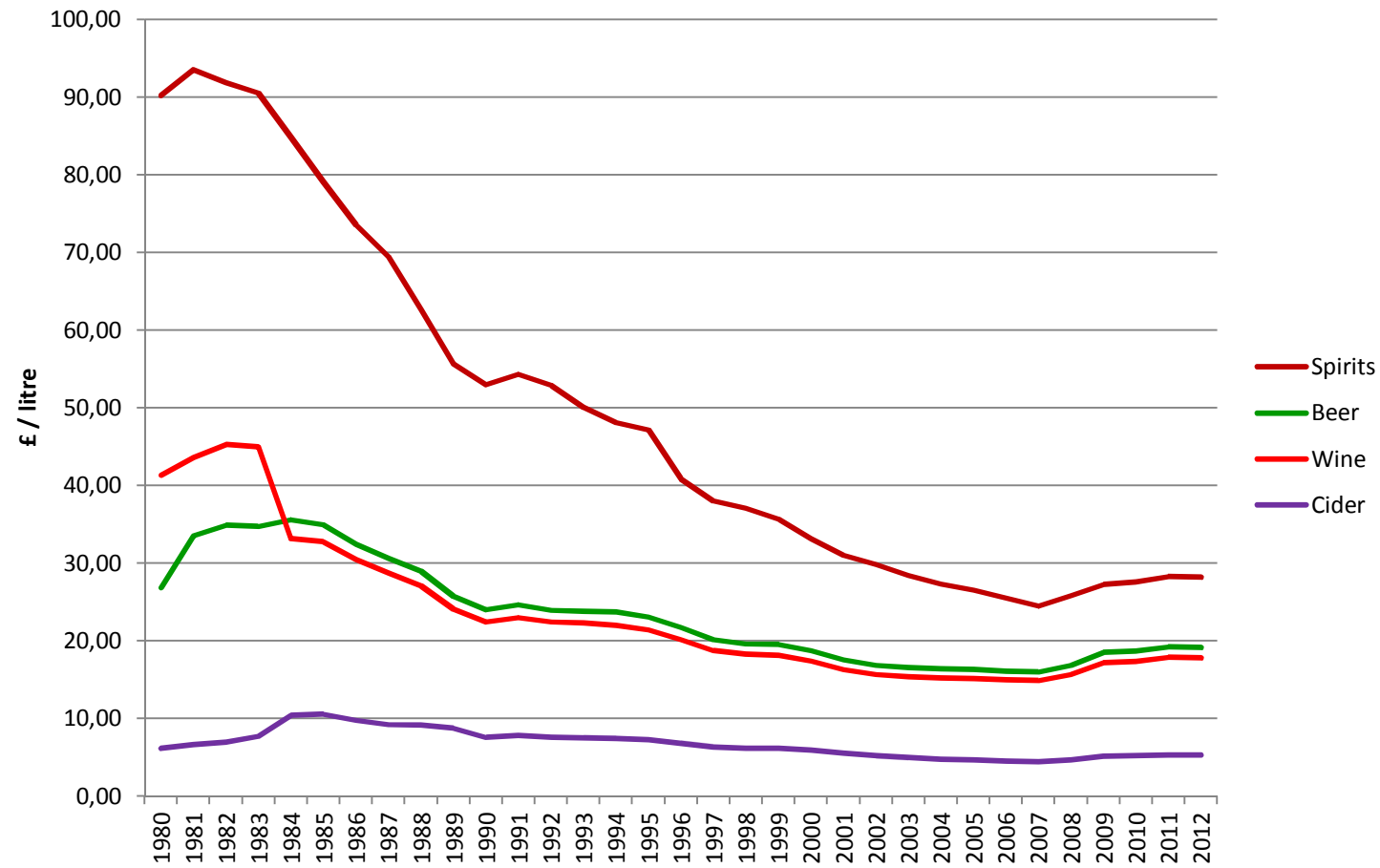
**Trends in mortality from alcohol related liver disease in England and Wales ,
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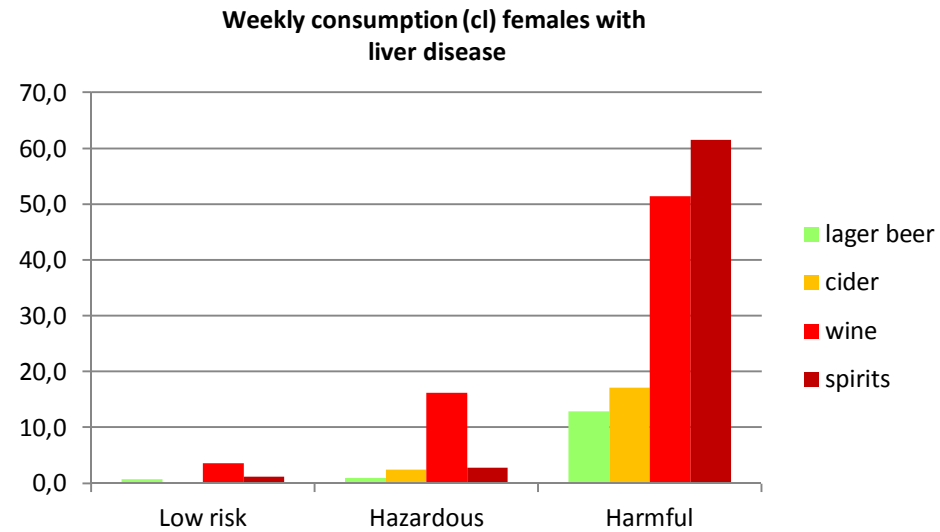
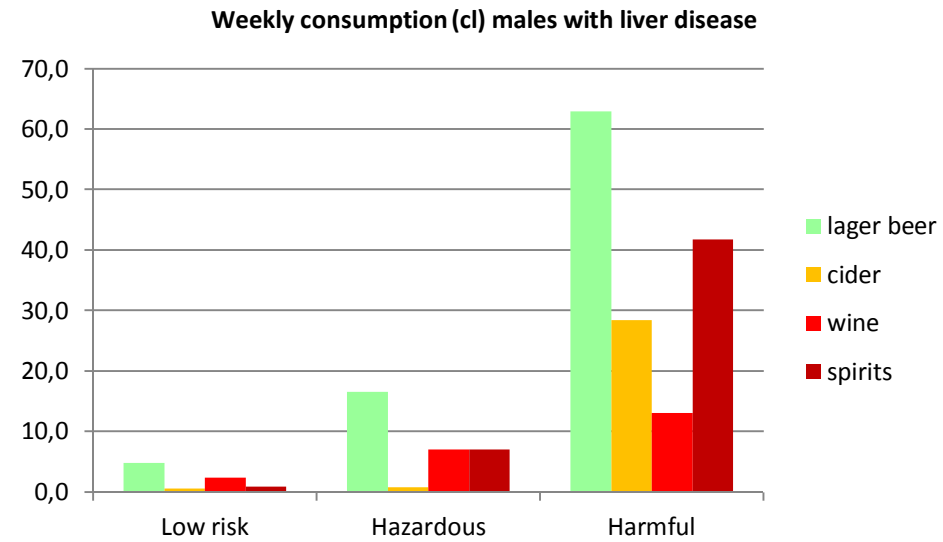


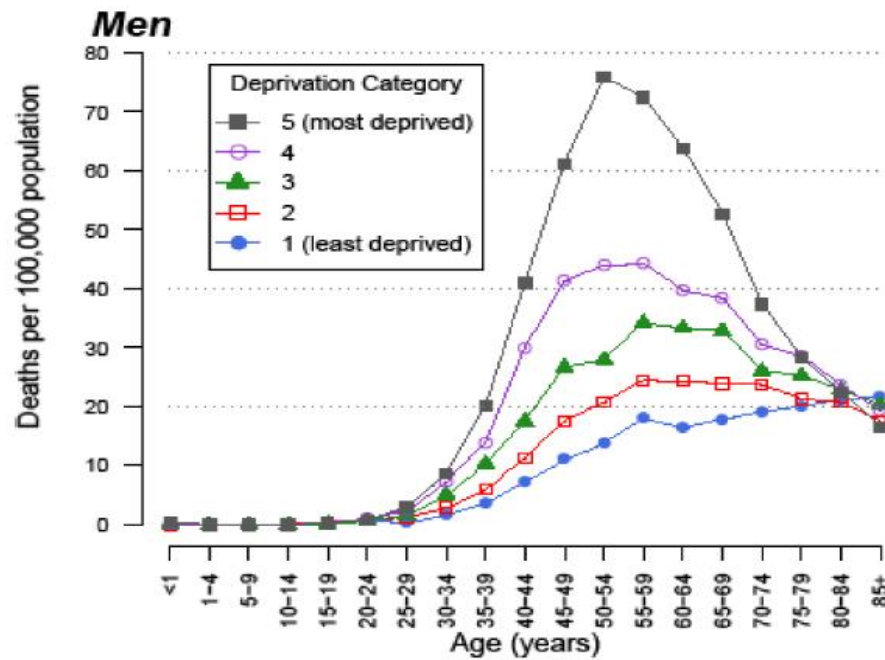


Impact of alcohol duty on affordability adjusted for changes in retail price index and disposable income,
Using same methodology as used by ONS in Statistics of Alcohol 2013

**Impact of duty changes on corrected cost of pure alcohol
compared with actual price in 2012**

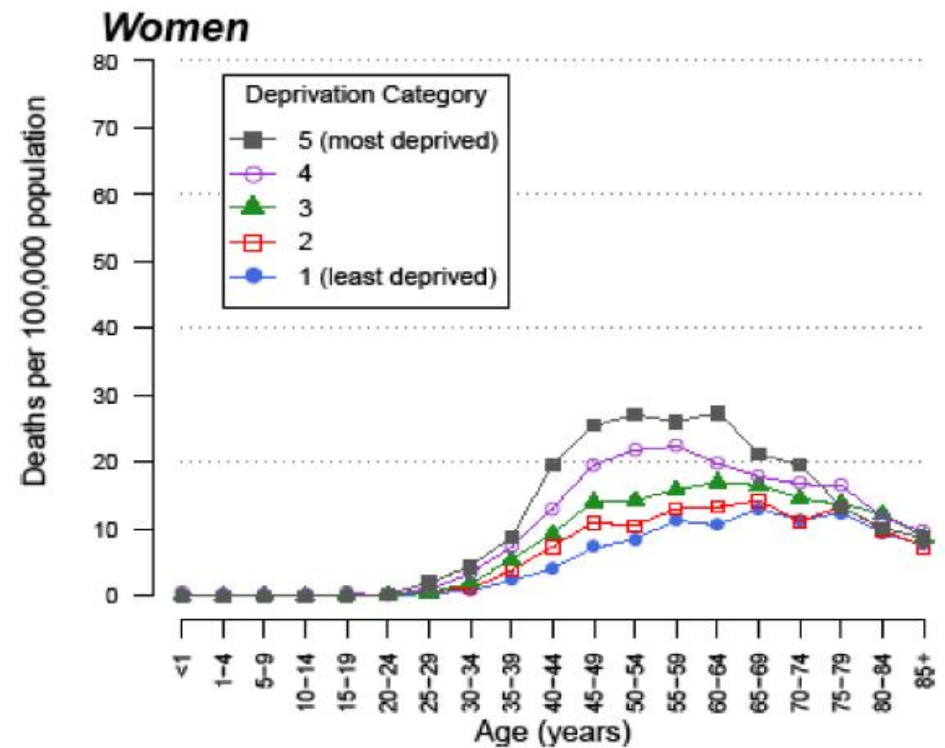




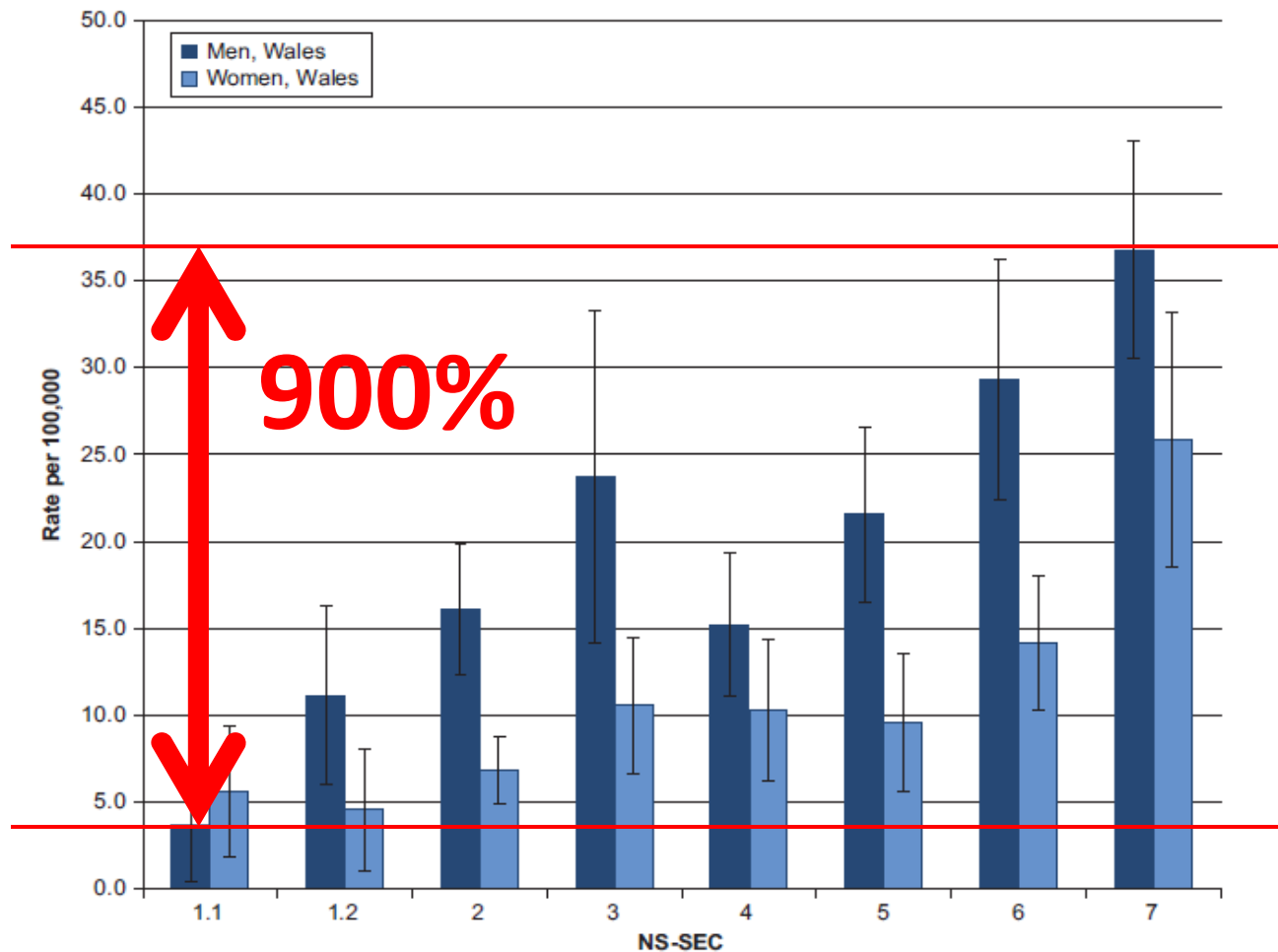


Socioeconomic deprivation, urban-rural location and alcohol-related mortality in England and Wales

Sally Erskine¹, Ravi Maheswaran², Tim Pearson¹, Dermot Gleeson³



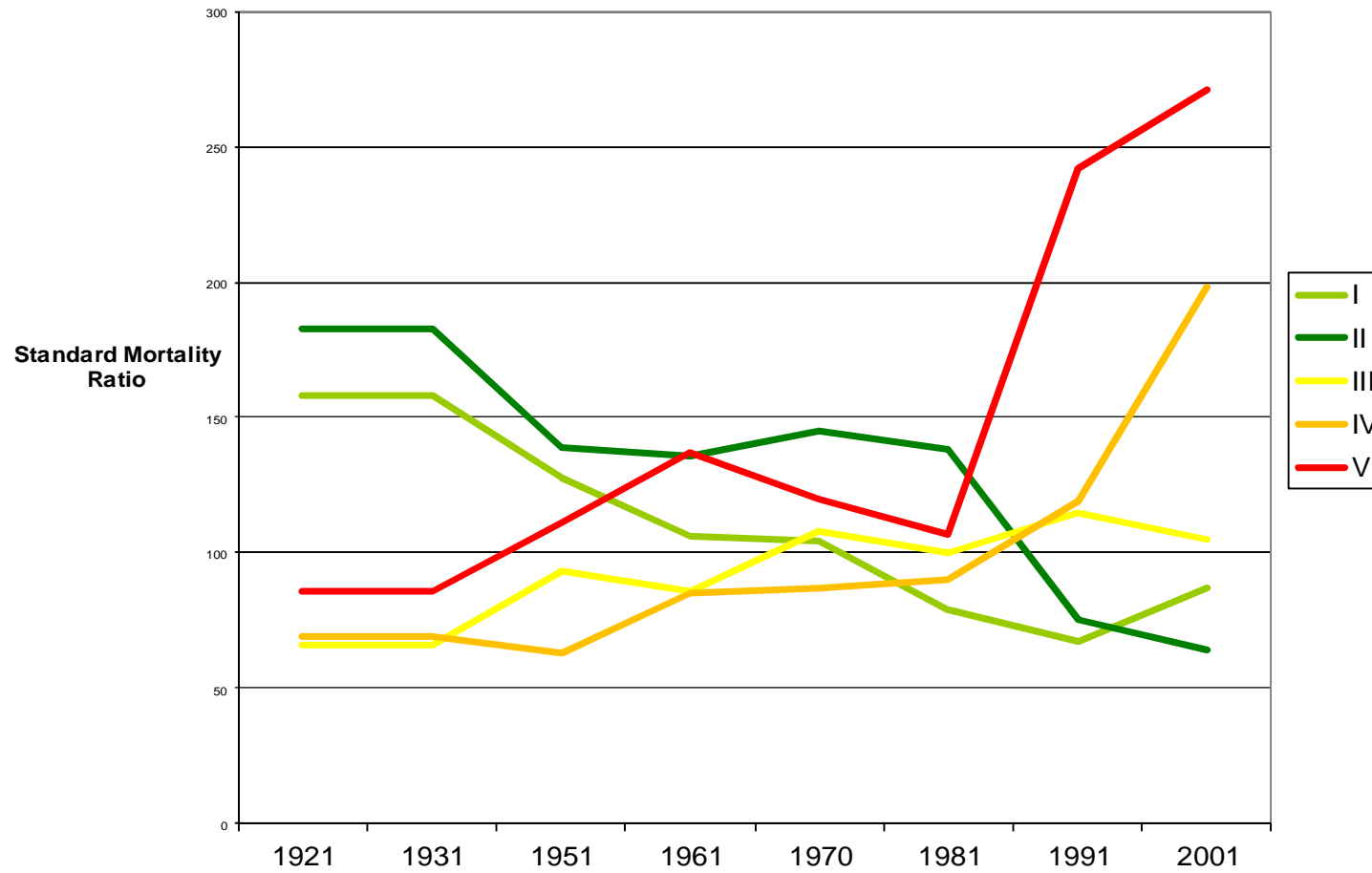
In Wales there is a 900% increase in alcohol related mortality with deprivation



Social inequalities in alcohol-related adult mortality by National Statistics Socio-economic Classification, England and Wales, 2001–03

Veronique Siegler, Alaa Al-Hamad, Brian Johnson, Claudia Wells Office for National Statistics and Nick Sheron Southampton University

Changes in liver mortality with Social Class



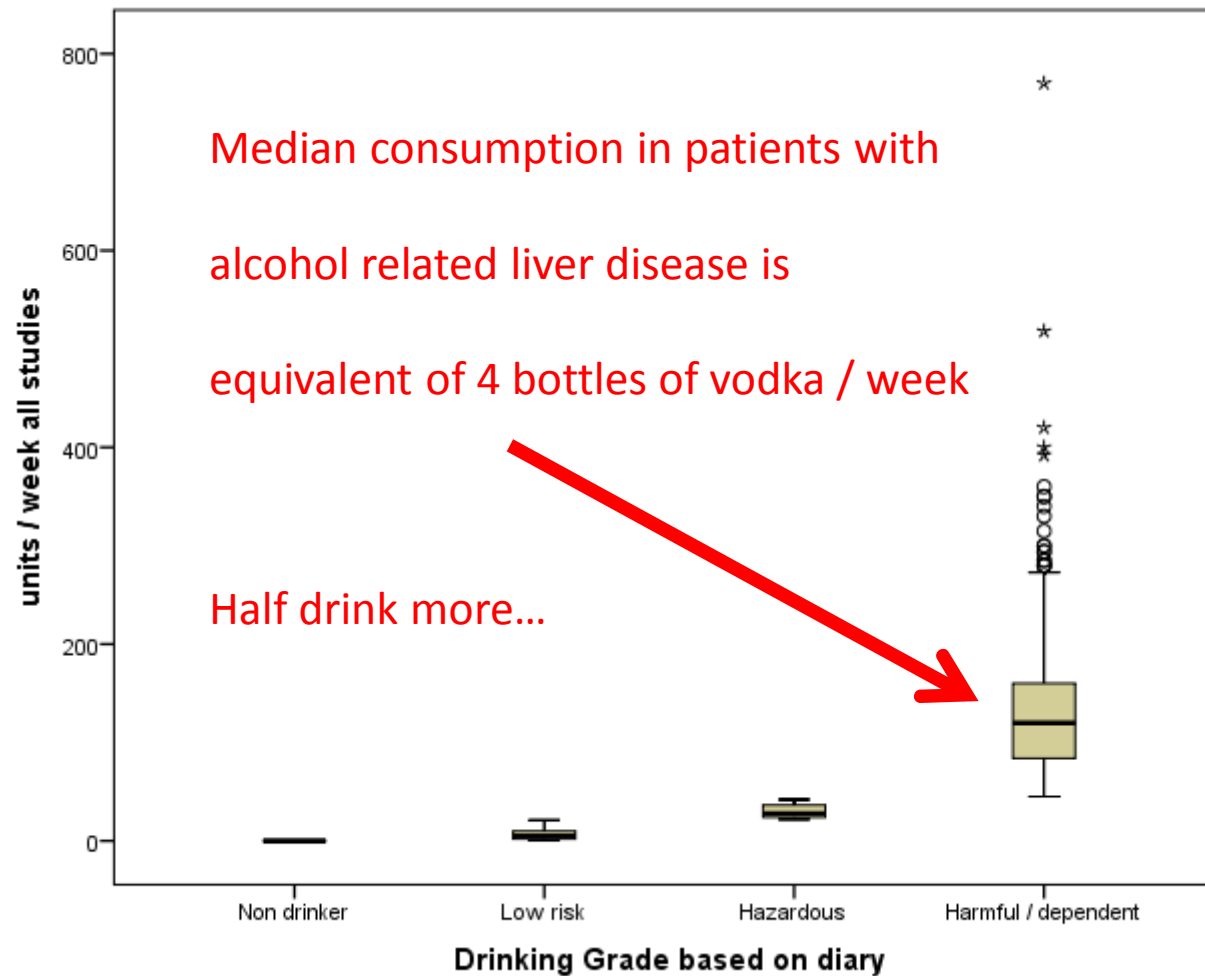


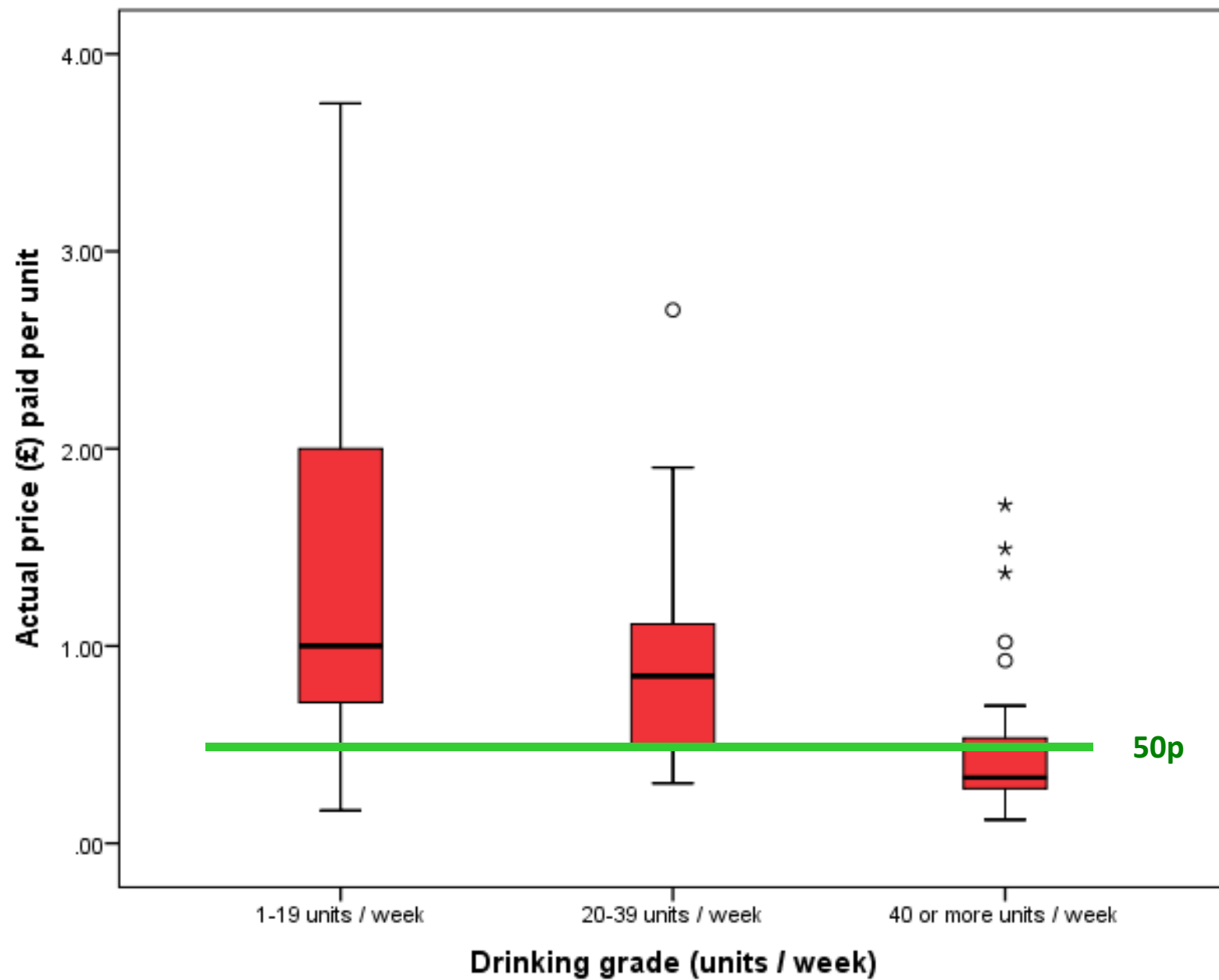
House of Commons Health Select Committee 2010

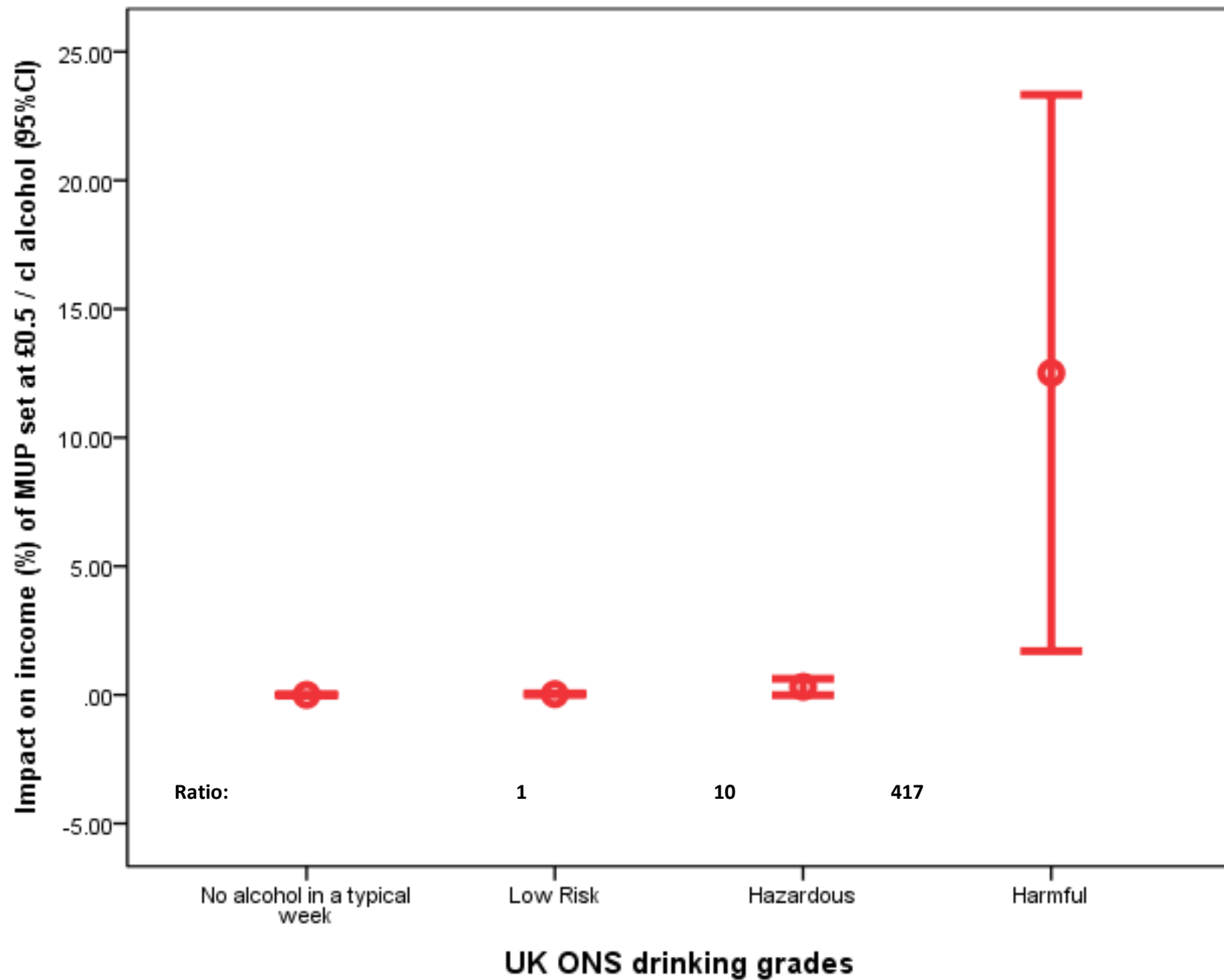
Analysis of written submissions top five proposals

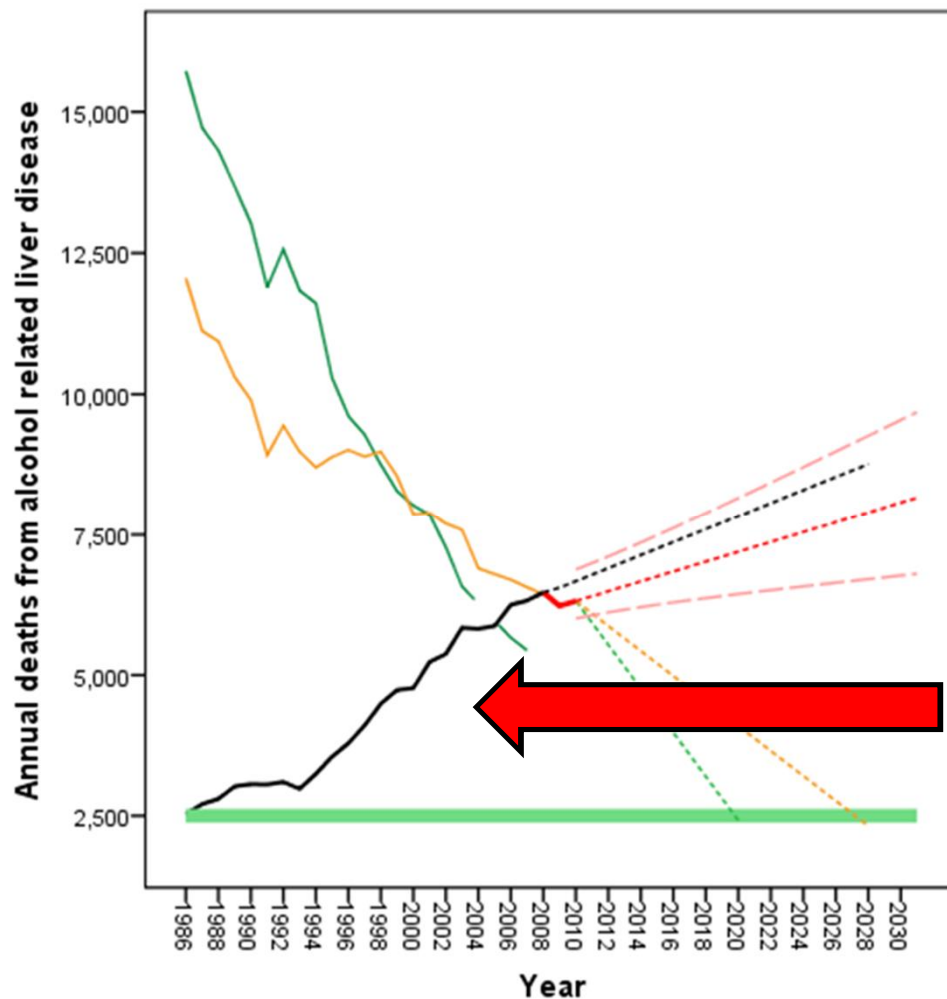
		Health	Industry
Target population consumption	X		
Increase duty on alcohol		X	
Minimum price		X	
Improve treatment		X	
Early detection and intervention	X		
Target intervention at heavy drinkers			X
Partnership approaches			X
No regulations			X
Information			X
Education			X

Weekly alcohol consumption in 381 liver patients in Southampton









In 1985 UK liver death rates were as good as Netherlands, Sweden, Norway, and New Zealand

53,000 avoidable liver deaths 1996-2012

67,000 avoidable deaths by 2013-2030.

Drinks industry lobbying will have resulted in 98,000 avoidable liver deaths between 1985-2030.

The Wine and Spirit Trade Association

Economic Impact Assessment

December 2013

Executive Summary

1.1 Background to the study

In October 2013, EY were commissioned by The Wine and Spirit Trade Association (WSTA) to undertake an Economic Analysis of the wine and spirit industry in the UK. WSTA is the UK organisation for the wine and spirit industry representing over 340 companies producing, importing, transporting and selling wines and spirit.

1.2 Methodology and approach

The economic analysis undertaken by EY includes:

A snapshot of the impact the wine and spirit industry currently has on the UK in terms of GDP, employment and government revenues measured in terms of direct, indirect and induced effects.

An impact assessment of the Alcohol Duty Escalator on the wine and spirit industry and the wider economy.

POLICY SUMMARY 6

Promoting health,
preventing disease:
is there an
economic case?

Alcohol costs some 2.3% of GDP, mostly from lost productivity, a figure likely to double if the costs to people other than the drinker are included.+

UK GDP = \$ 2.435 trillion = £ 1,494 billion

5% GDP = £ 75 billion

Alcohol duty + VAT = £17 billion

Net cost to UK = £61 billion

Number of UK taxpayers = £30 million

Net cost / taxpayer = £2,000 / year

According to the OECD the net cost of alcohol to each taxpayer

£38 / week

The Wine and Spirit Trade Association

Economic Impact Assessment

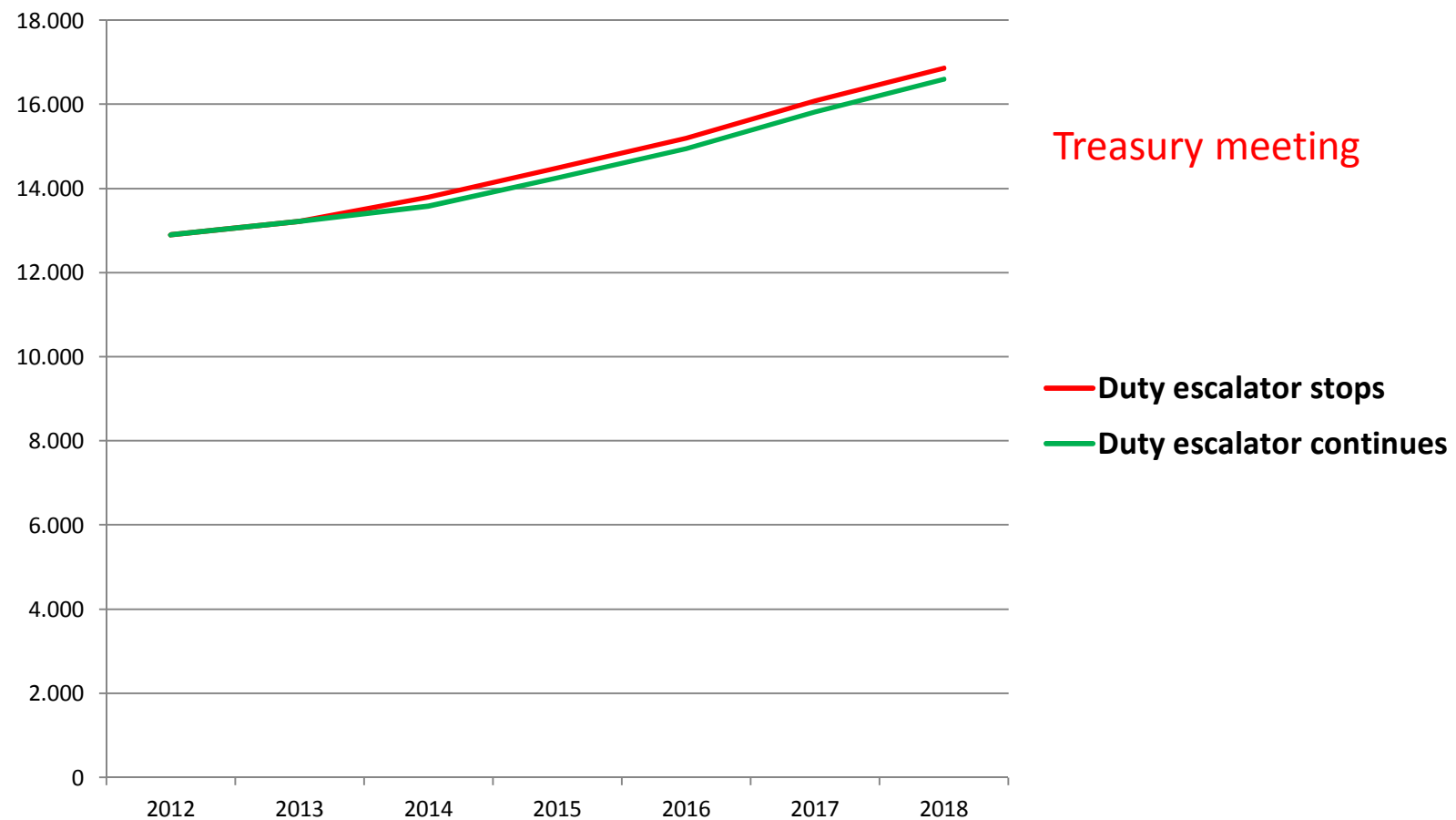
December 2013

Executive Summary

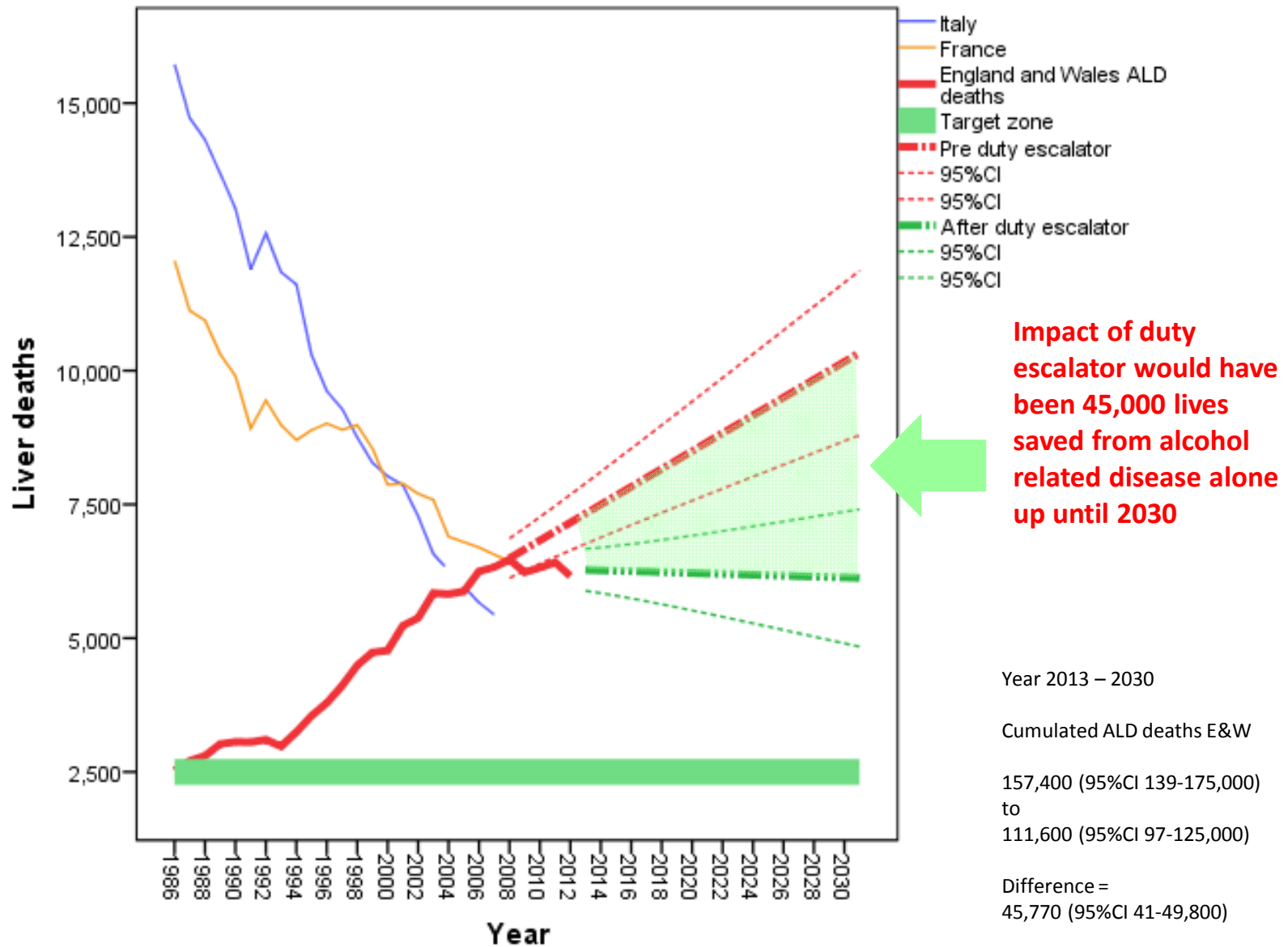
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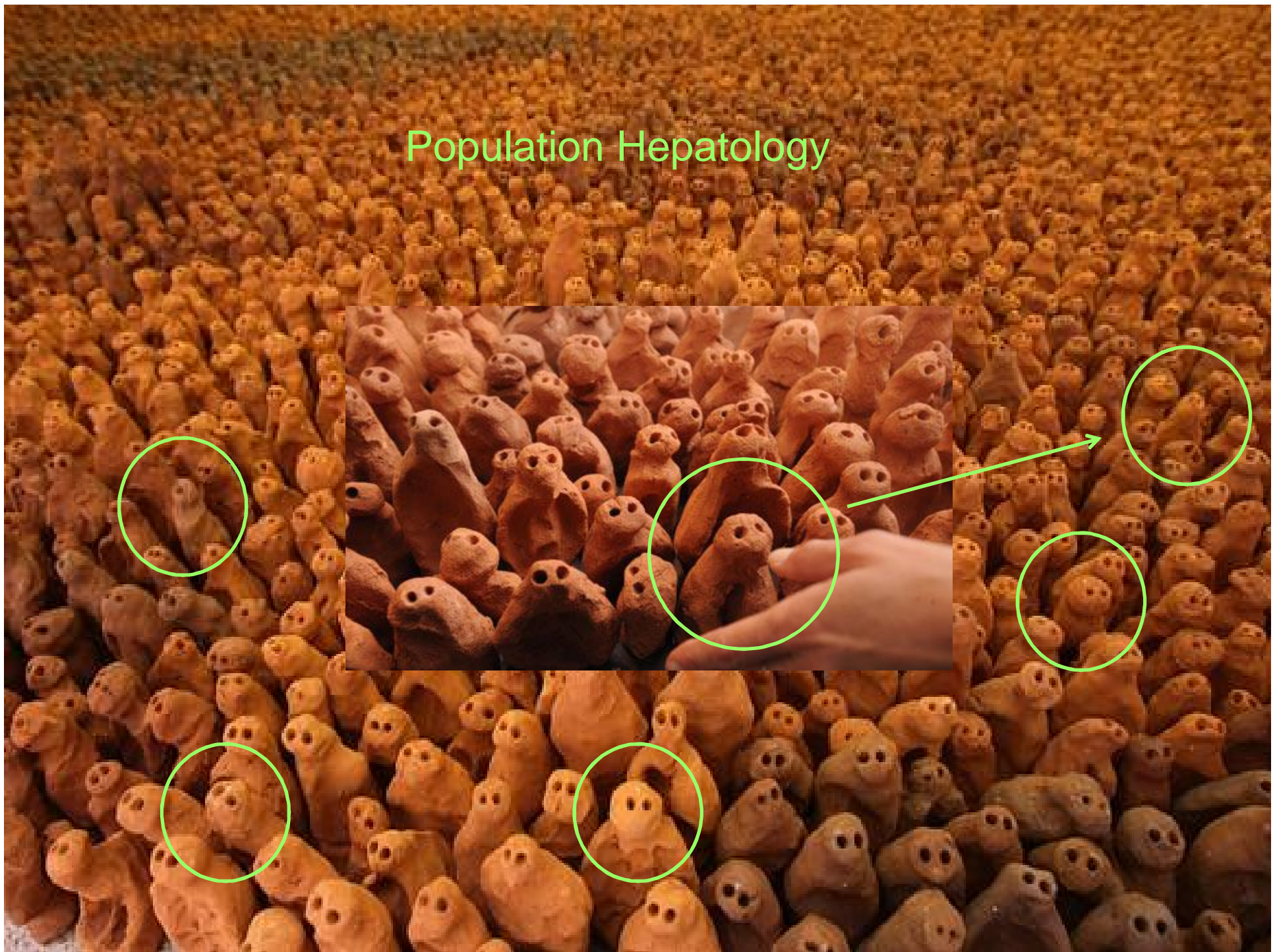
WSTA E&Y report : Direct tax contribution



Impact of the 2008 duty escalator on projected liver deaths



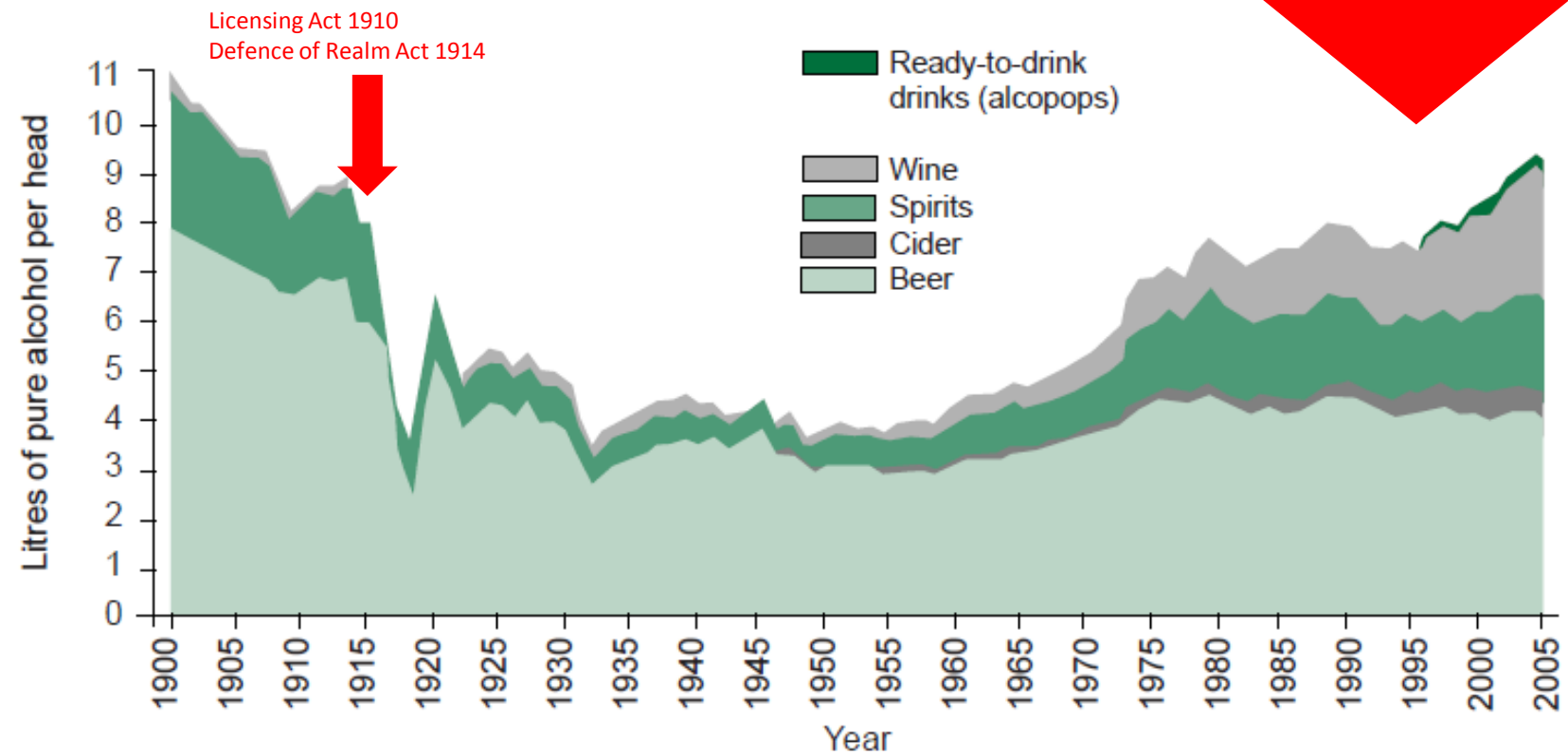
Population Hepatology



STOP

Third alcohol epidemic

Figure 1 – per capita alcohol consumption in the UK (litres of pure alcohol)



Source: Statistical handbook 2007 (British Beer and Pub Association, 2007)

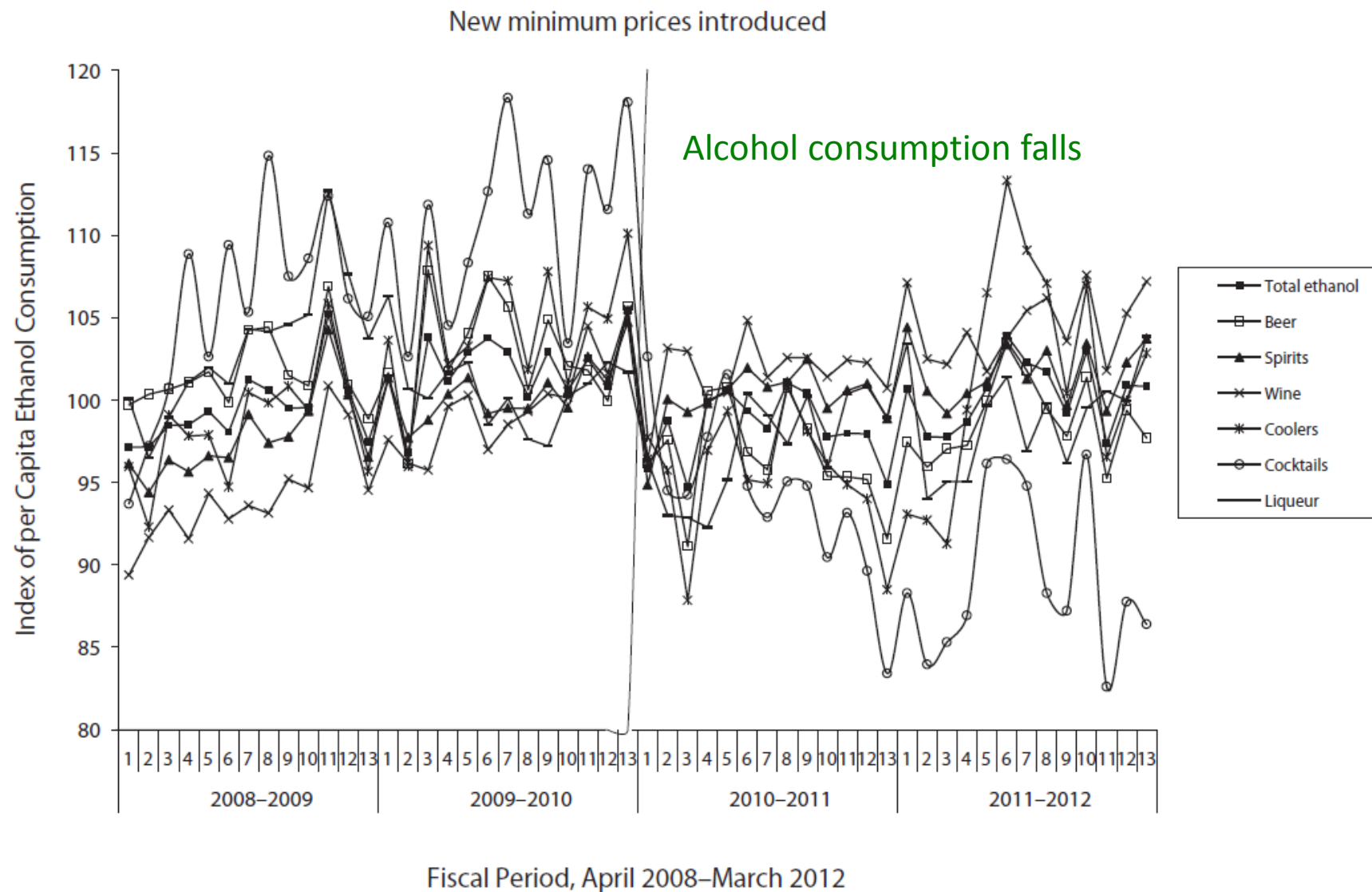


House of Commons Health Select Committee 2010

Analysis of written submissions top five proposals

		Health	Industry
Target population consumption	X		
Increase duty on alcohol		X	
Minimum price		X	
Improve treatment		X	
Early detection and intervention	X		
Target intervention at heavy drinkers			X
Partnership approaches			X
No regulations			X
Information			X
Education			X

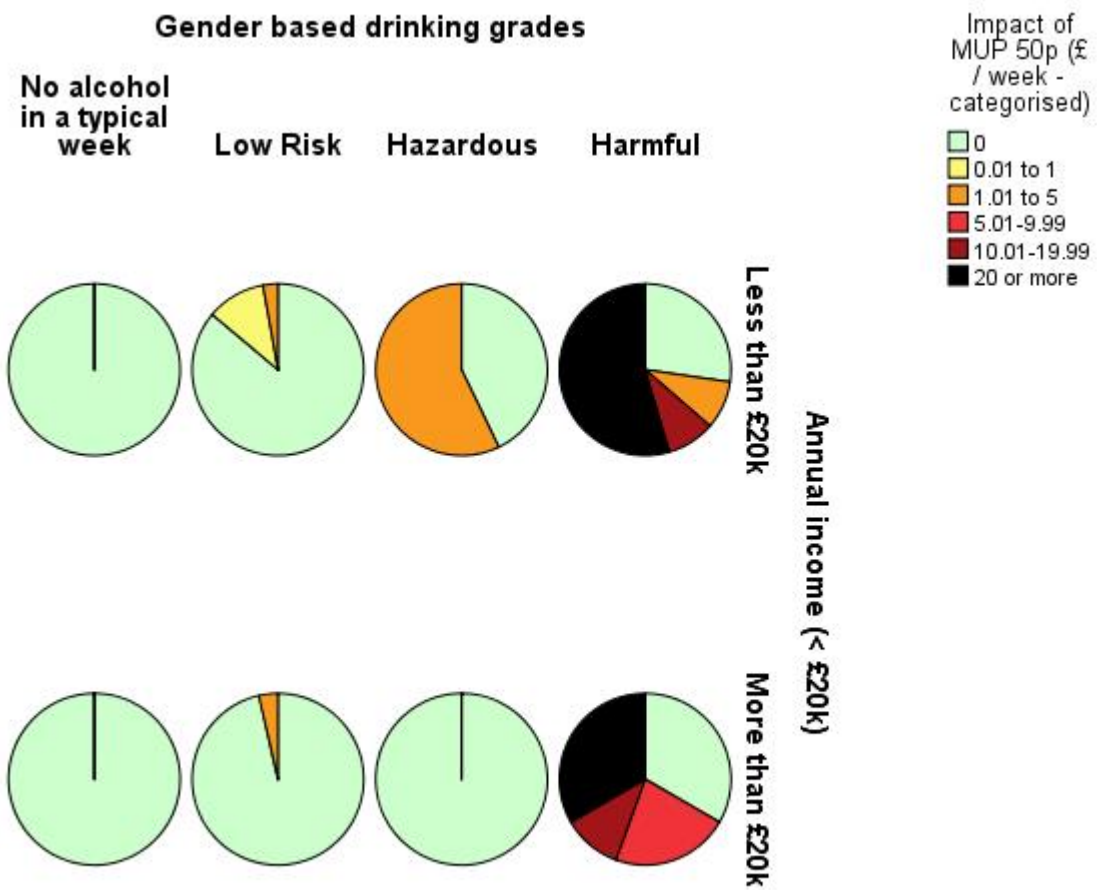
All purchase taxes are regressive...



Note. 100 = mean per capita ethanol for each fiscal year.

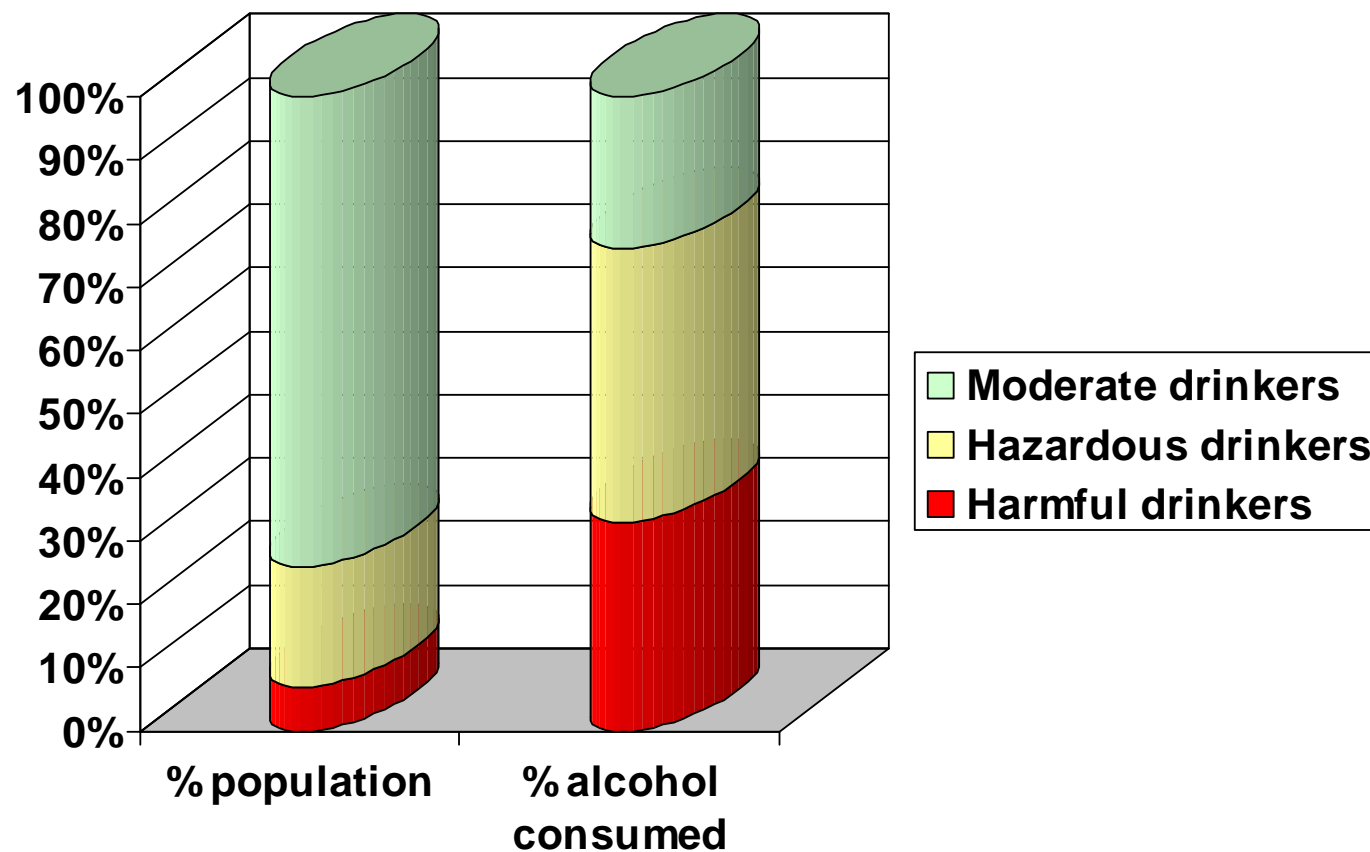
The Raising of Minimum Alcohol Prices in Saskatchewan, Canada: Impacts on Consumption and Implications for Public Health

**ars or older per capita consumption of beers, spirits, coolers, cocktails, and liqueurs
atchewan, Canada, April 2008–March 2012.**

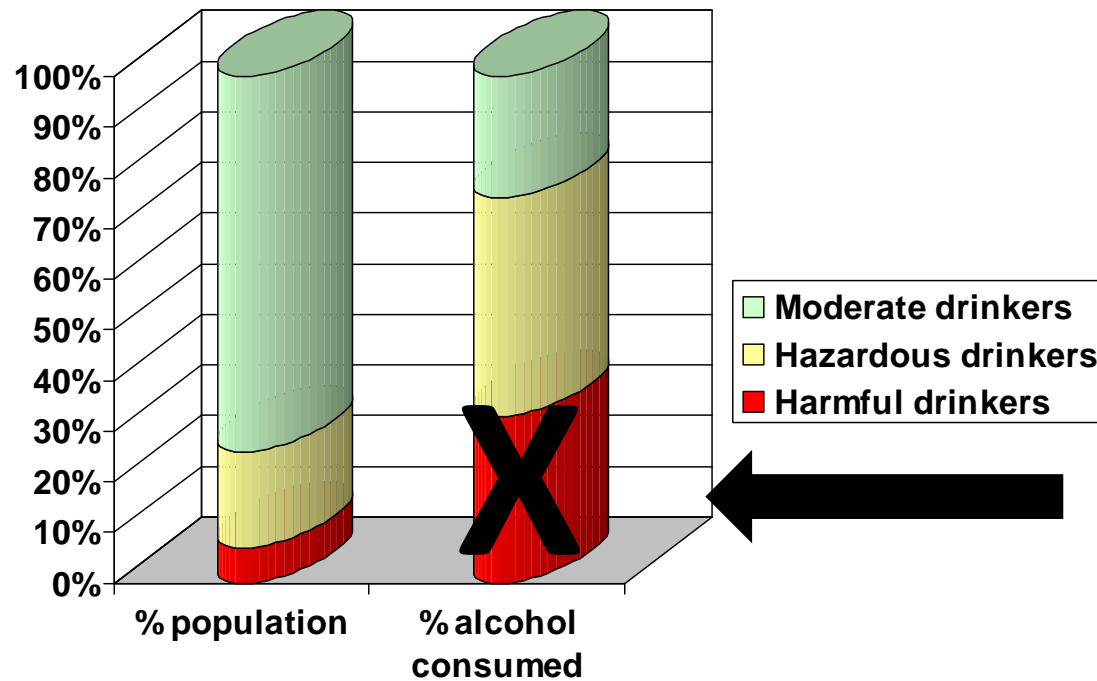


The Pareto principle

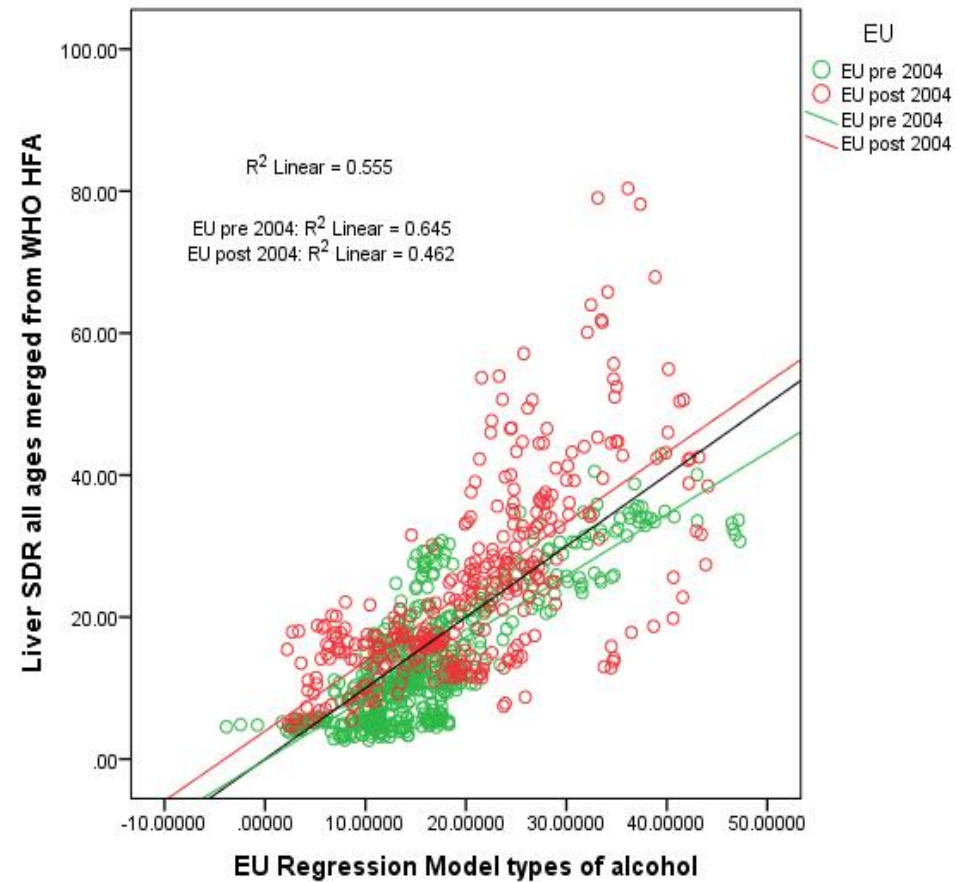
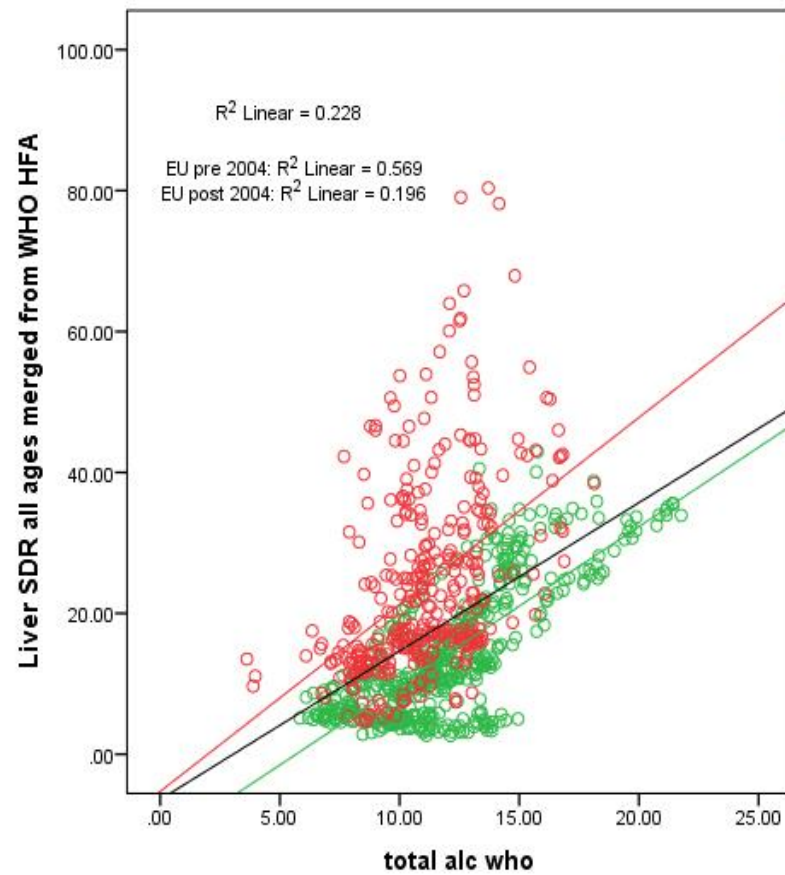
1/5 of consumers consume 4/5 of any product



Three-quarters of the alcohol sold is drunk by hazardous/harmful drinkers



The drinks industry consistently states that it is favour of policies that target harmful drinkers



Alcohol consumption explains 28%

+ type of alcohol explains 55%

UK GDP = \$2.435 trillion = £1,475 billion

OECD calculates alcohol costs 2-3% of GDP for OECD 34

(total corporation tax income = 2.7% GDP)

= £36.9 billion / year mostly in lost productivity

There are 30 million UK taxpayers = £1,230 each

= £23 / week for each one

£10.2 billion comes back in alcohol taxation

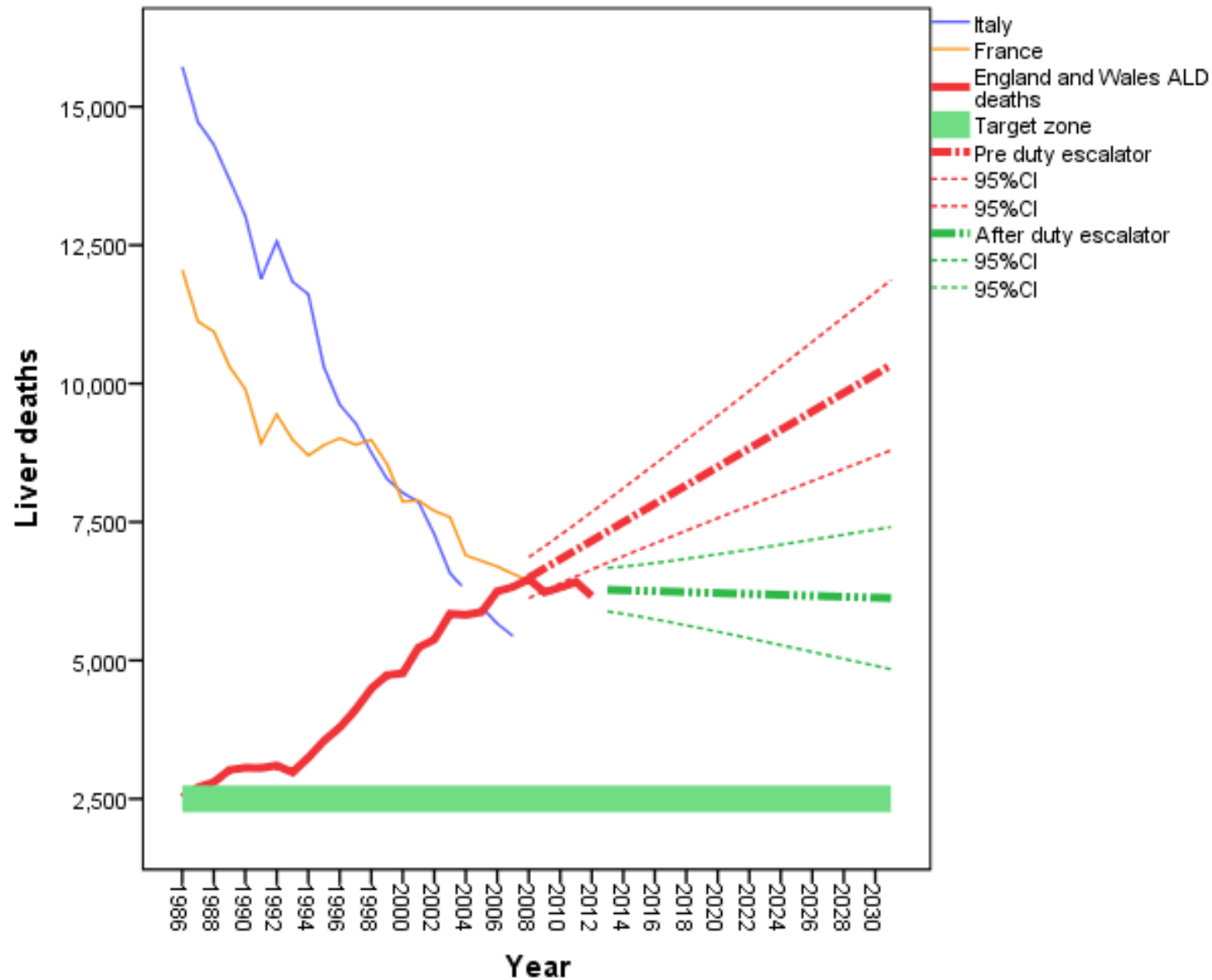
= £6.50 / week

Net cost of alcohol to each UK taxpayer = £16.50

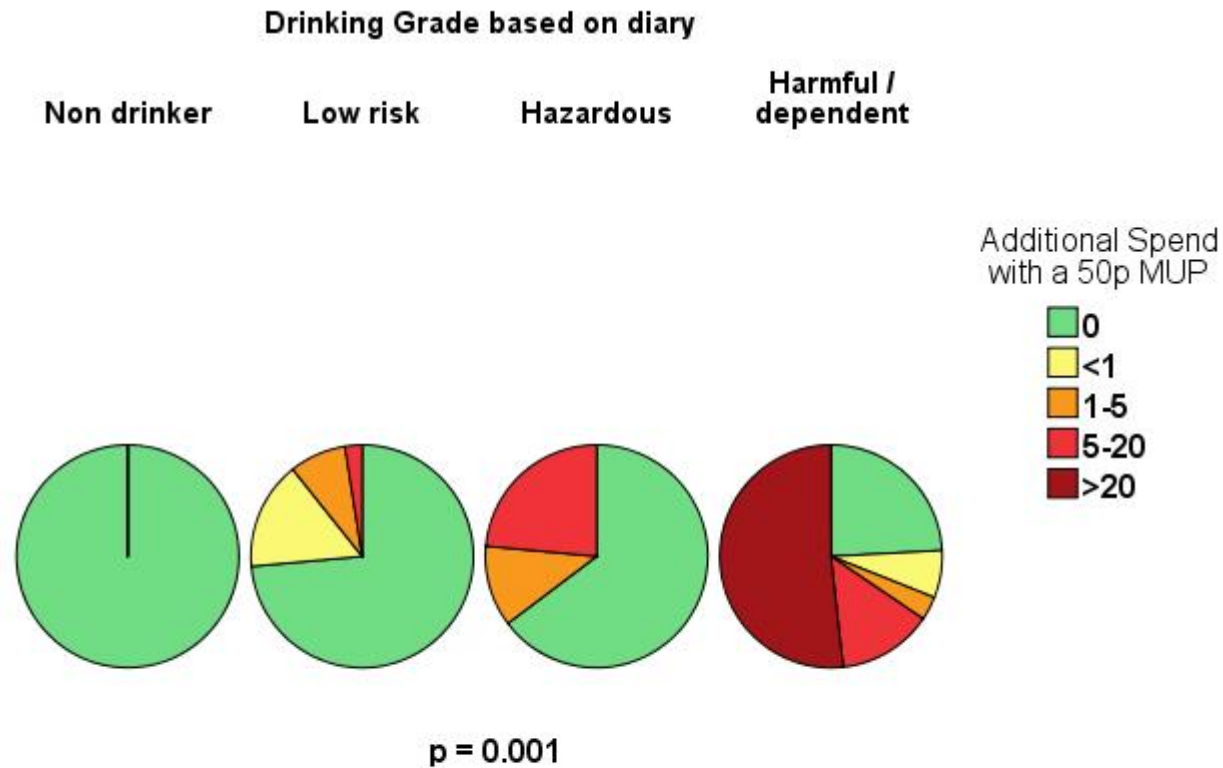
Merkur, S, Sassi, F., and McDaid, D. Promoting health, preventing disease: is there an economic case?
OECD; WHO; European Observatory on Health Systems and Policies; 2013. Report No.: Policy
Summary 6.

HMRC. Number of taxpayers and registered traders. 2013.

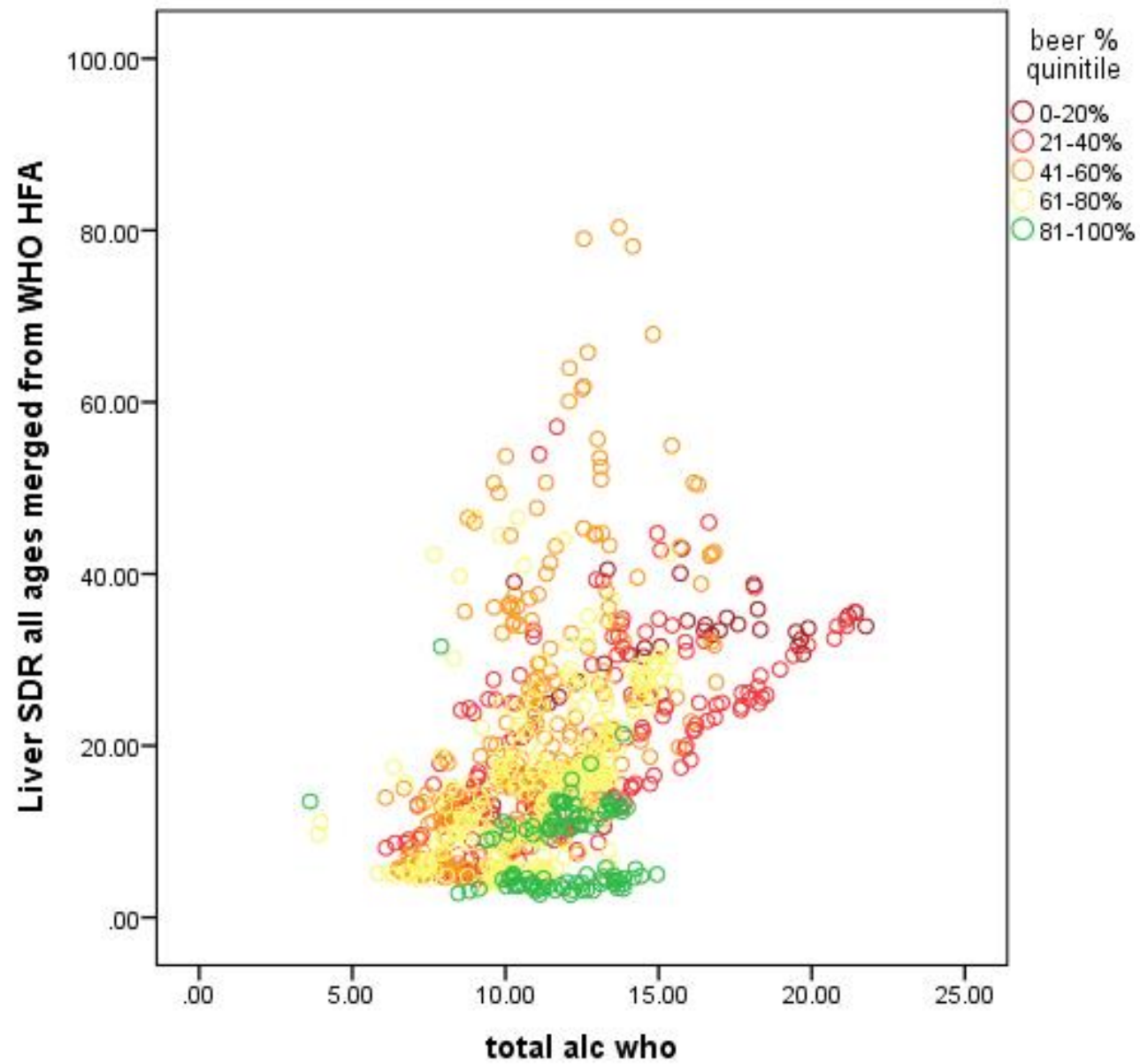
Impact of the 2008 duty escalator on projected liver deaths



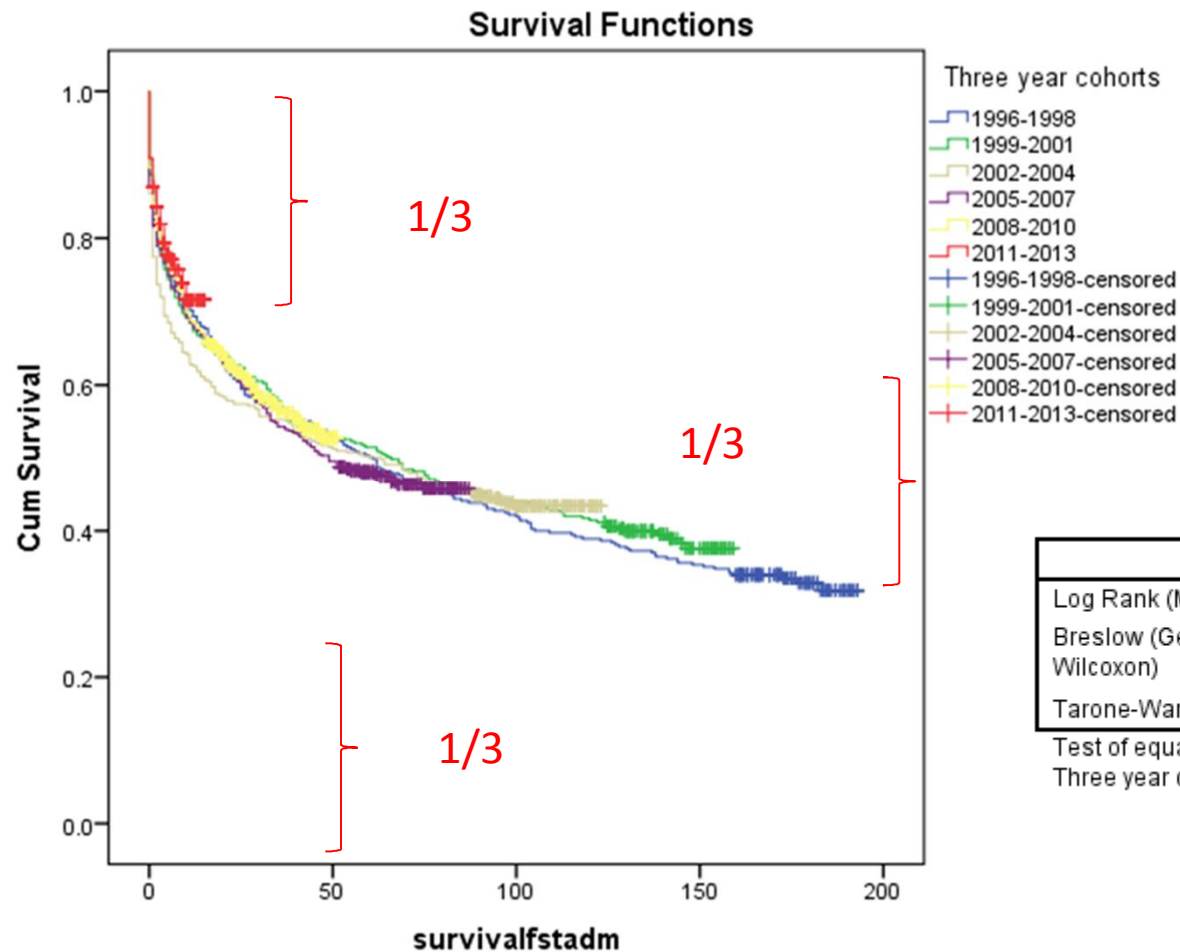
The actual impact of MUP on patients with liver disease (n= 143)



Minimum unit price is an exquisitely targeted measure



Survival of admissions to the Liver Unit Southampton

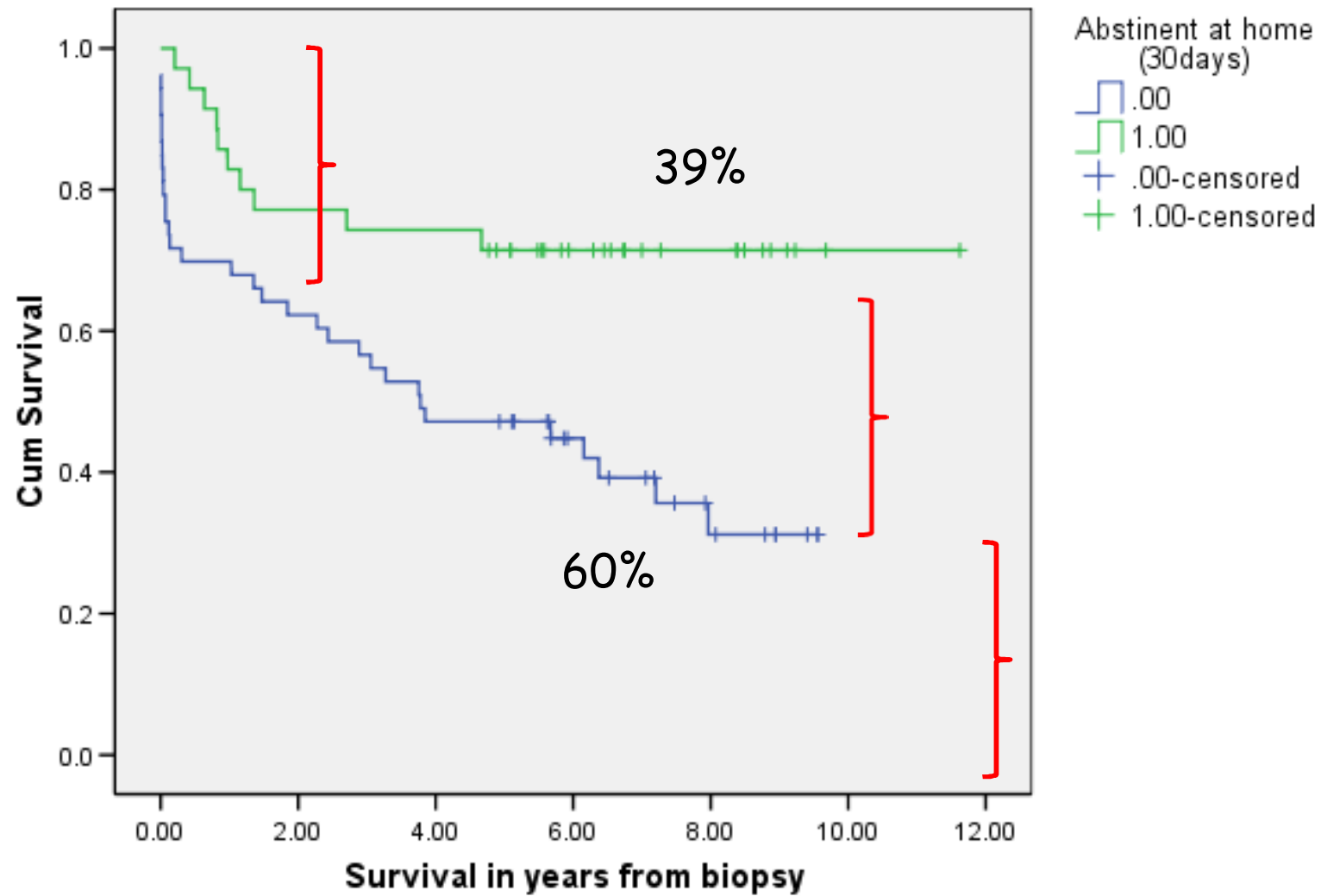


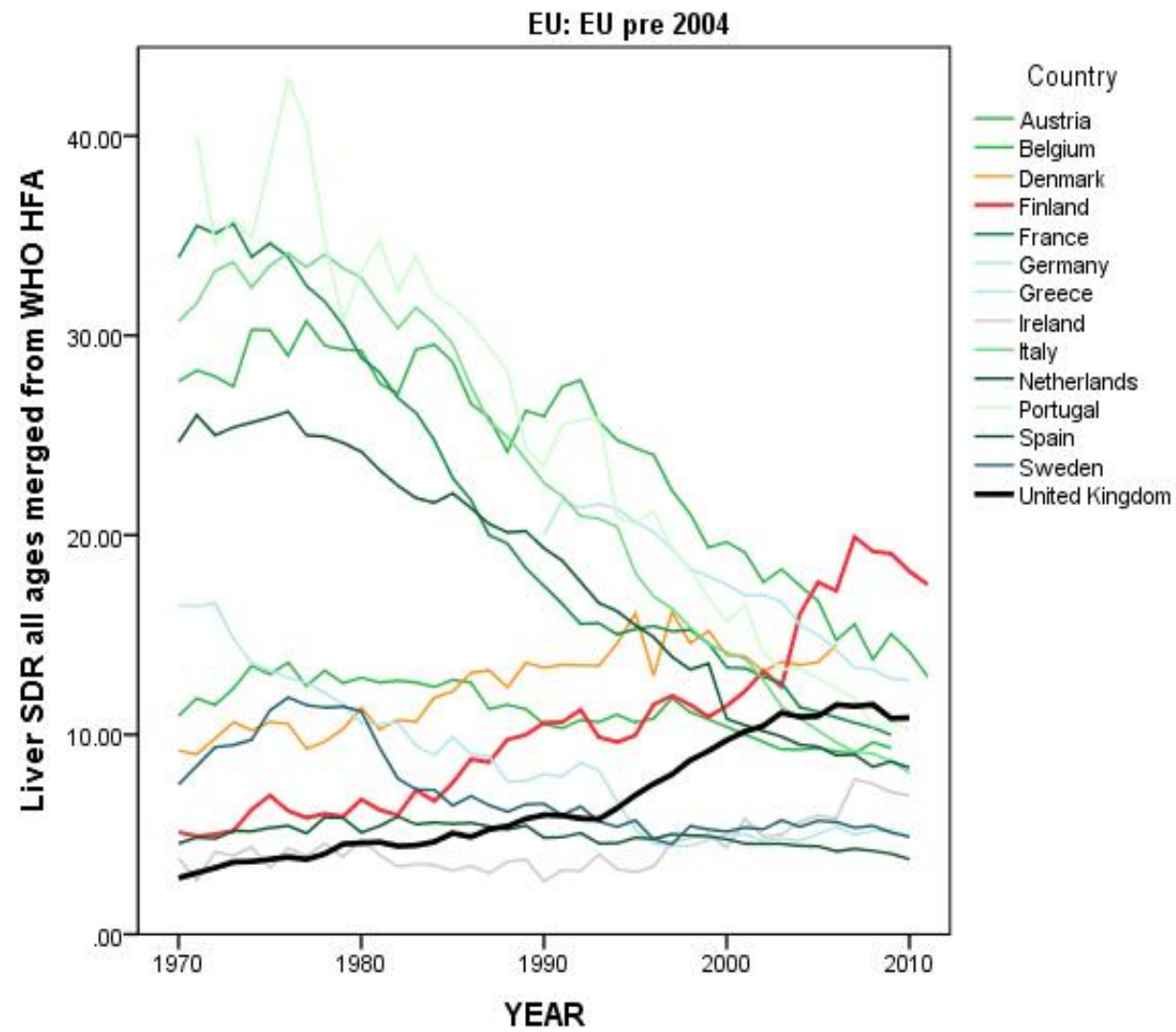
Overall Comparisons

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	3.255	5	.661
Breslow (Generalized Wilcoxon)	5.288	5	.382
Tarone-Ware	3.966	5	.554

Test of equality of survival distributions for the different levels of Three year cohorts.

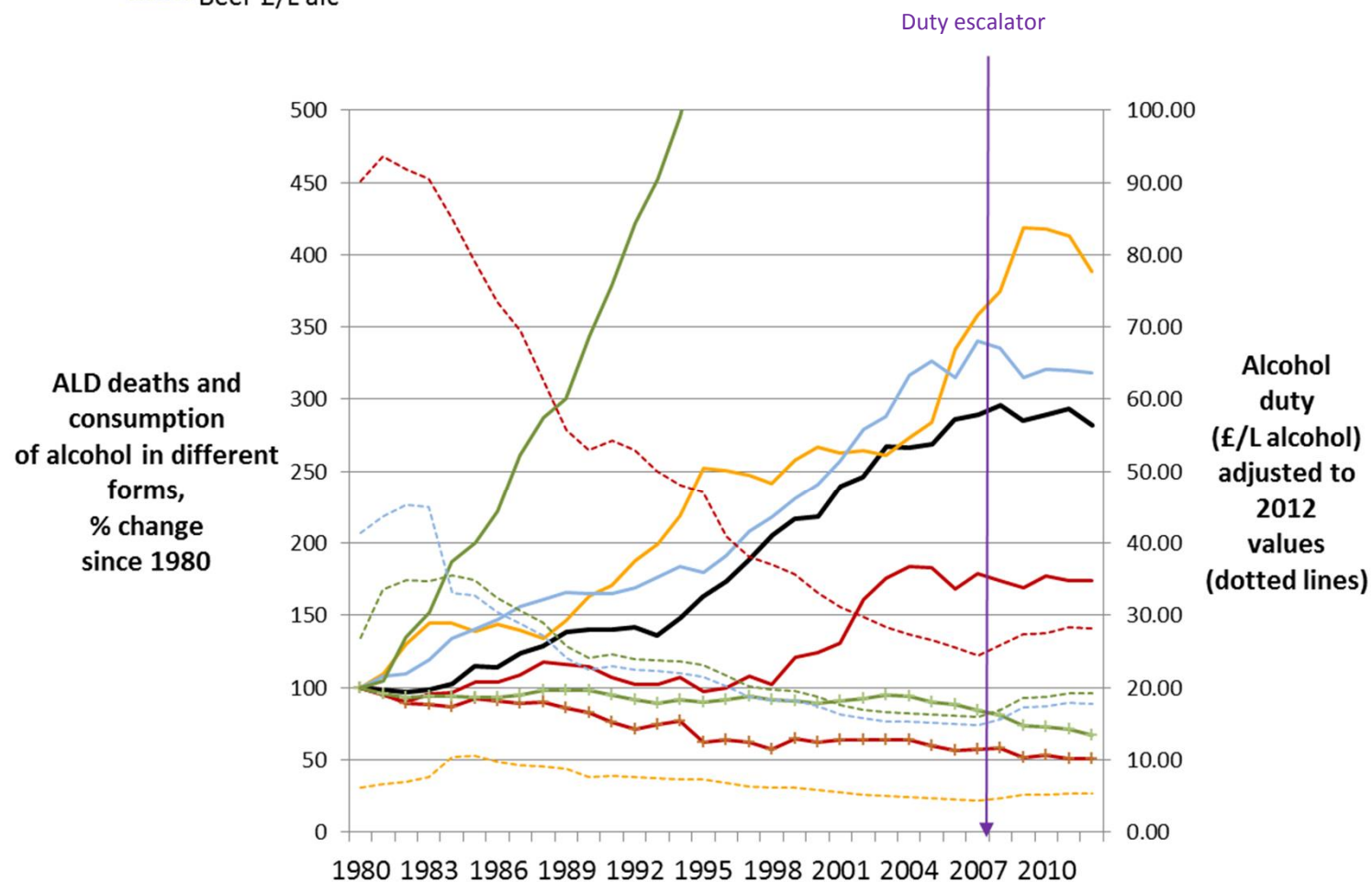
Drinking behaviour determines long term mortality



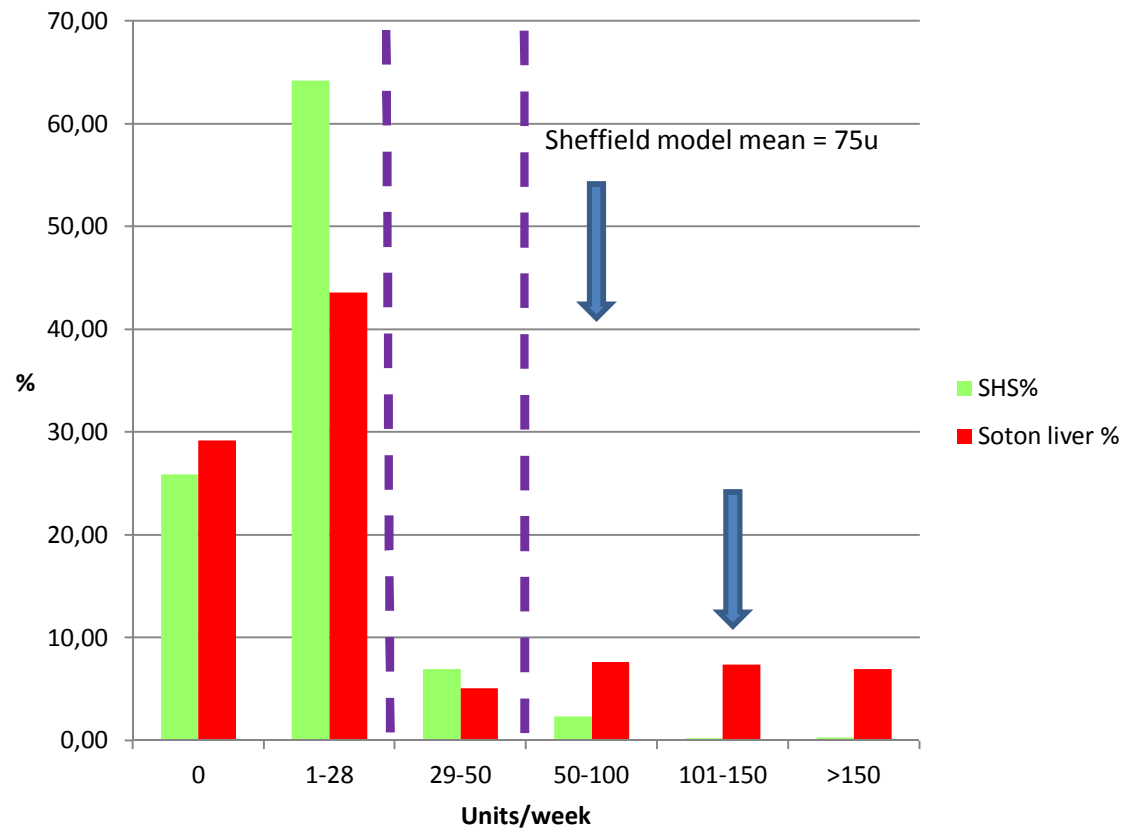


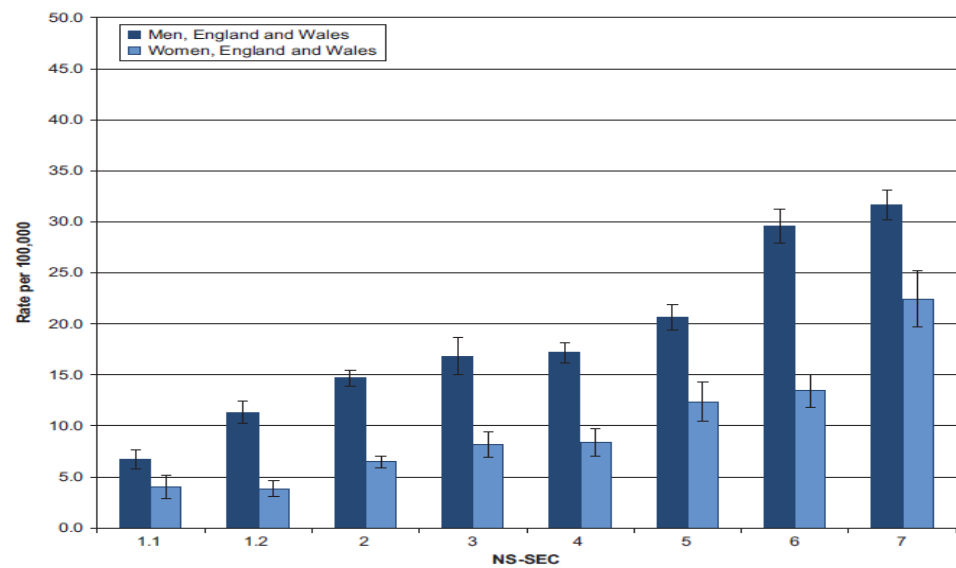
Trends in mortality from alcohol related liver disease in England and Wales , consumption of spirits, wine, beer and cider, and changes in duty

- Alcohol related liver deaths E&W %
- + Whisky consumption %
- Wine consumption %
- Packaged strong lager %
- - Cider £/L alc
- - Beer £/L alc
- White spirits consumption %
- Cider consumption %
- + Total lager / beer consumption alcohol %
- - Spirits £/L alc
- - Wine £/L alc



Scottish Health Survey v Soton Liver unit





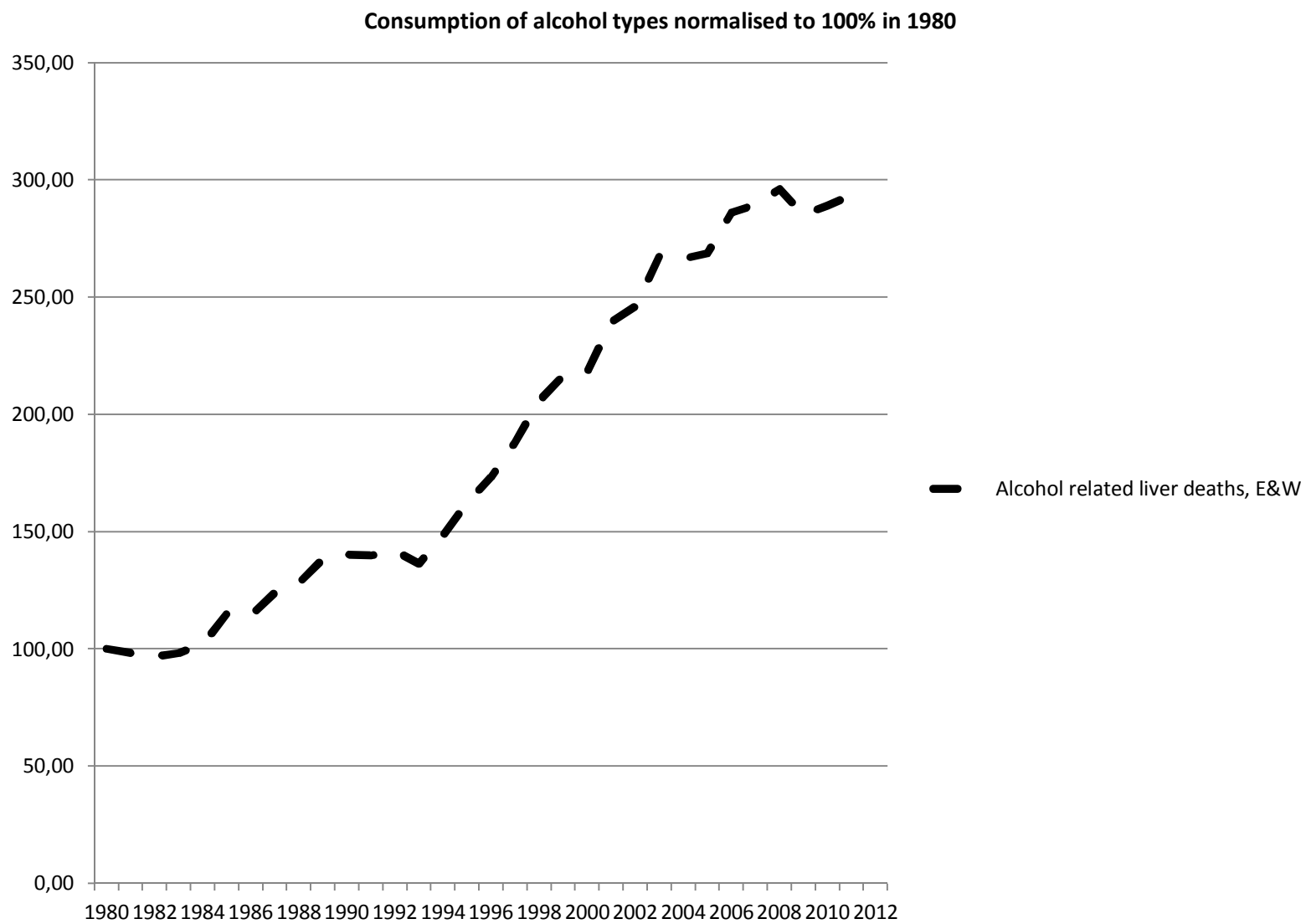
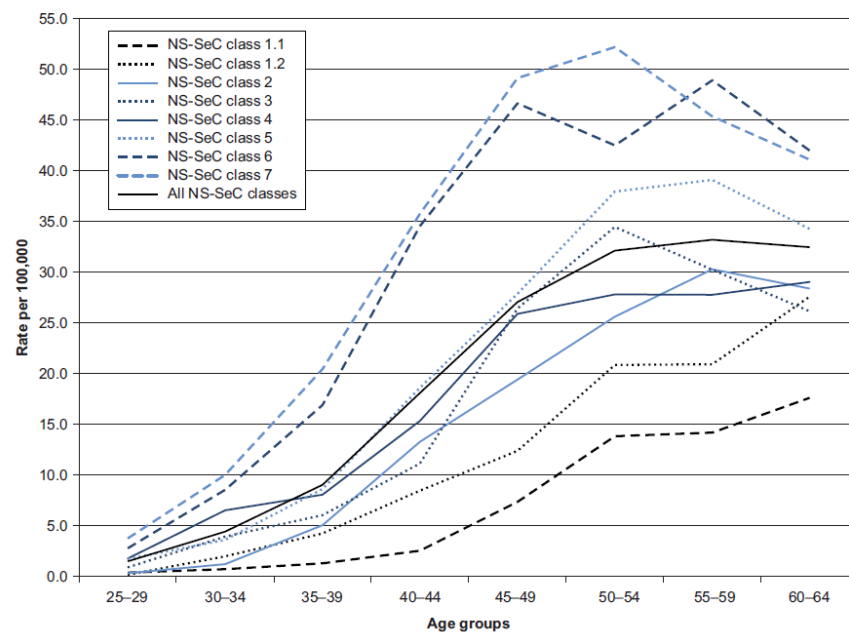
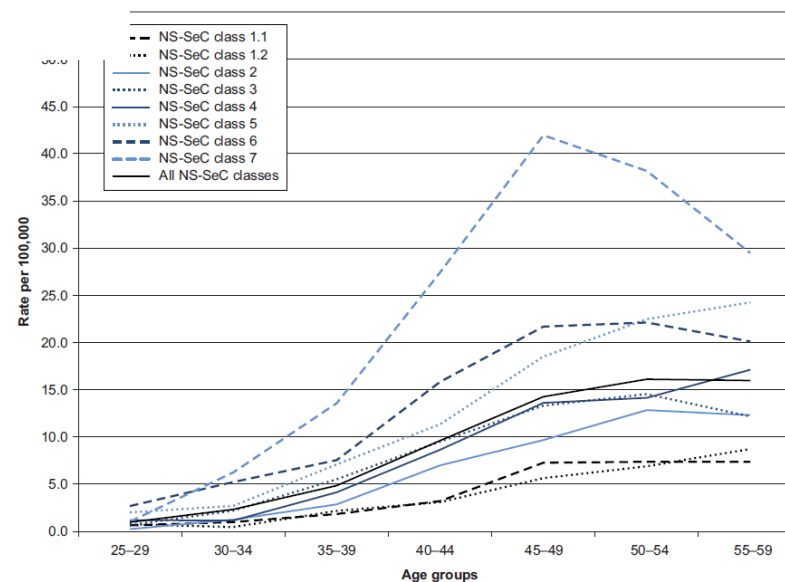


Figure 1 **Age-specific mortality rates from alcohol-related causes of death by five-year age group and NS-SEC, men aged 25–64, England and Wales, 2001–03**

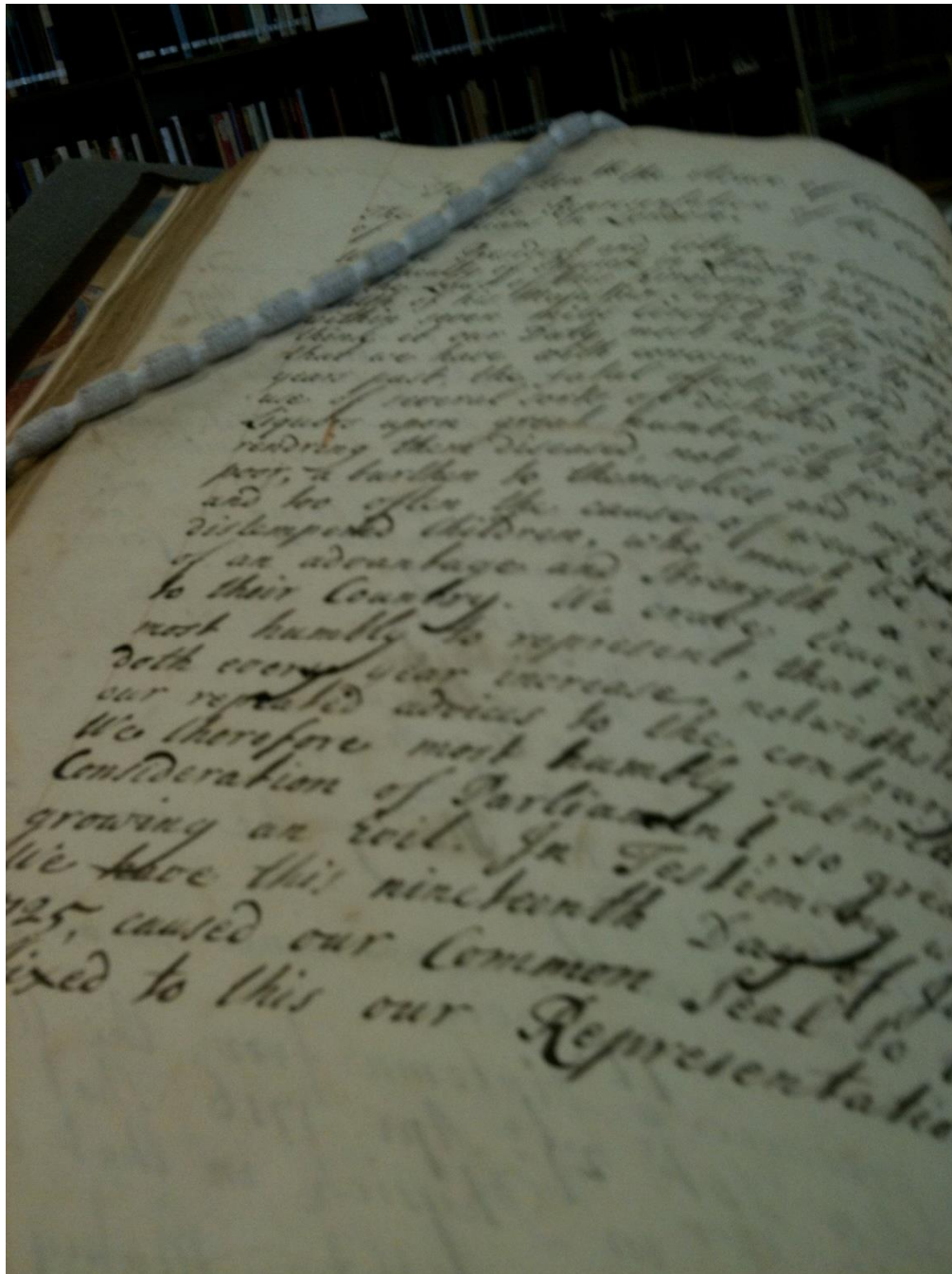


Health Statistics Quarterly 50 Summer 2011

Age-specific mortality rates from alcohol-related causes of death by five-year age group and NS-SEC, women aged 25–59, England and Wales, 2001–03



Source: ONS



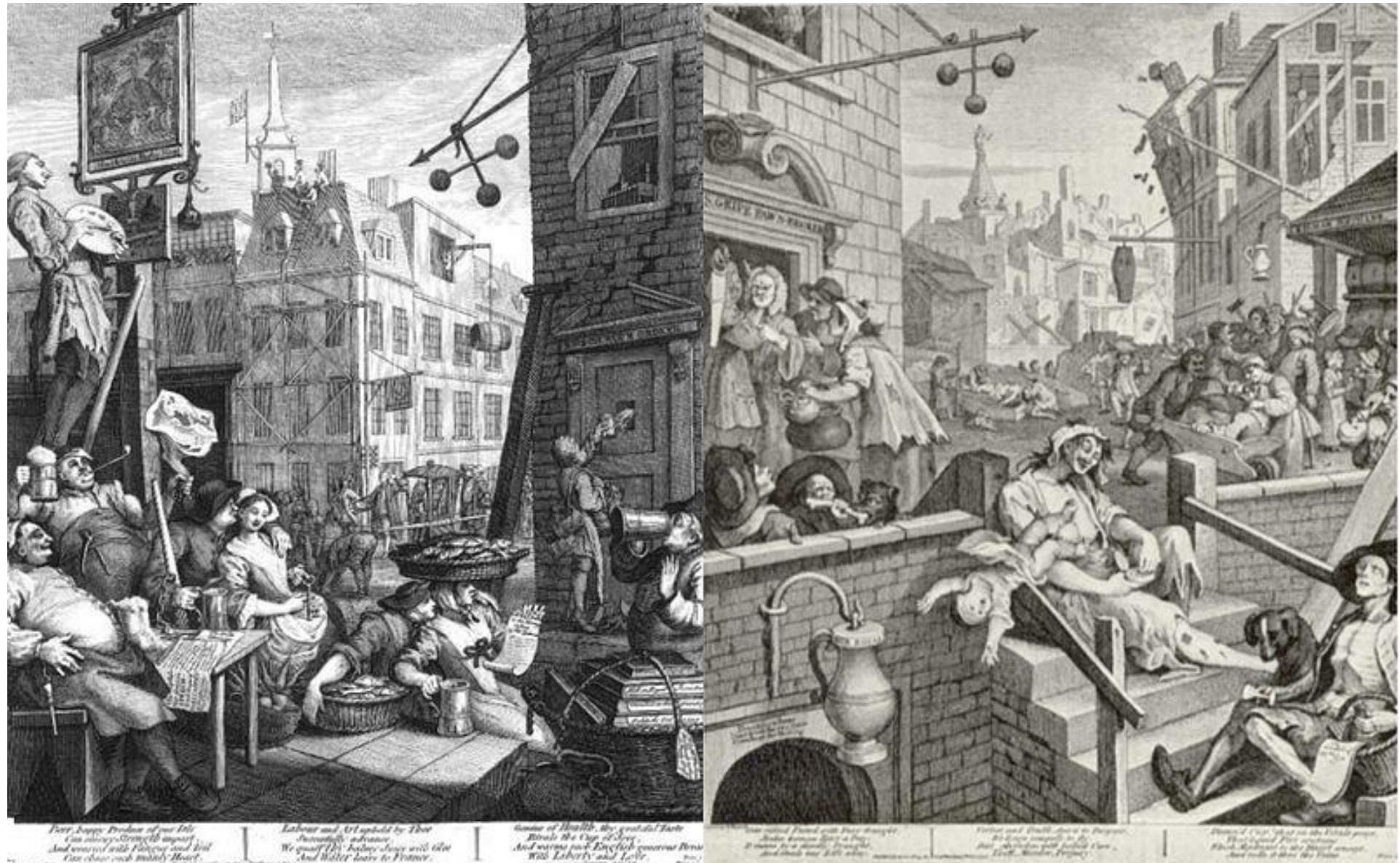
Royal College of Physicians 1725 petition to the House of Commons

—We, the President and Collegeⁱ of physick in Londonⁱ do think it our duty most humbly to represent that we have with concern observedⁱ the fatal effectsⁱ of distilled spirituous liquors upon great numbers of both sexes, rendering them diseas'd, not fit for business, poor, a burthen to themselves and neighbours, and too often the cause of weak, feeble, and distemper'd childrenø

Weⁱ represent that this custom doth every year increase, notwithstanding our repeated advices to the contrary. We therefore most humbly submit to the consideration of Parliament, so great and growing an evil.ø

ōGin, cursed Fiend, with Fury fraught, Makes human Race a Prey. It enters by a deadly Draught And steals our Life away.ō

Rev James Townley, 1751



To those Melancholly Sufferers (by a late Severe Act) the DISTILLERS this Plate is most humbly Inscrib'd by a Lover of Trade.

*The Funeral Procession of Madam Geneva Sep. 29. 1751.
Published according to Act of Parliament*

ōThe funeral procession of Madame Geneva 1752

Showing mourning gin shop owners commissioned by supporters of the gin trade



GINS Fun'ral mourn, lo, near the Body,
In ragged State moves rueful Loddy,*
Great Representative allow'd,
Of all who to her Empire bow'd:
DISTILLERS next, a gloomy Train,
Who vent their loud Complaints in vain,

* A Beggars well known about St Giles, & Dial's &c.

And from this vanquish'd, Torments Fate,
Their own Distress and Ruin date,
Each empty Cask, instead of Bell,
Sounds forth a doleful Fun'ral Knell.
Thy Punch houses oh Wapping moan,
And Redriff answers with a Groan.

Beneath their Burdens Porters droop,
No Dram to lift their Spirits up,
Cheap Cordial for the Poor Relief,
One half Penny could chase their Grief,
Tun for a Penny might be Jolly,
A Quarter Chear'd both John & Doll,

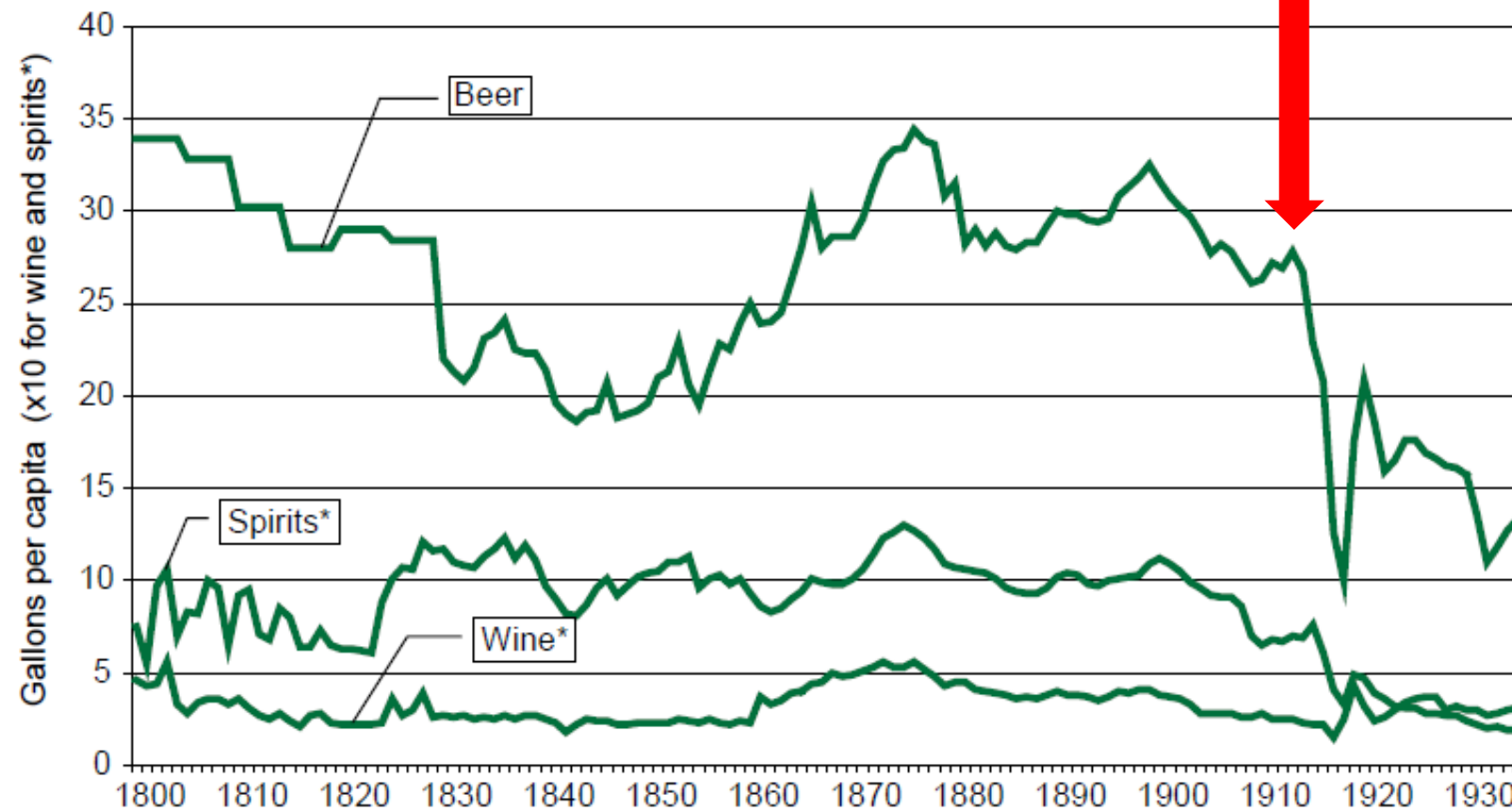
But now, this Act, They cry, will lurch us,
For Beer & Quarts too great a Purchase,
No, tis resolv'd DIVINE GENEVA!
We'll bravely perish e'er we'll leave ye:
With that the brimming Glass they ply,
And Poverty and Rags defy,

Their Brains with fuming Vapours turn,
They fall to grace their Monarchs Urn.
O J—k—l how immense thy Merit!
How vast those Patriots publick Spirit!
To strip the Poor of their chief Pleasure,
And Thoulands leave to starve at Leisure.

Printed for John Bowles & Son at the Black Horse in Cornhill London.

Licensing Act 1910
Defence of Realm Act 1914

Figure 1: Estimated per capita consumption 1800–1935¹³



Source: G. Wilson, *Alcohol and the Nation*

HANDS OFF THE POOR MAN'S BEER



"DON'T WE KNOW WHEN WE'VE HAD ENOUGH?"
"WHY SHOULD WE DRINK TEETOTAL STUFF?"

ALLIED BREWERY TRADERS' ASSOCIATION POINTS OUT THAT THE **LICENSING BILL**

IS A
BLOW at the **FREEDOM** of the **WORKING MAN**
30,000 Public Houses will be closed
in a short time, throwing
200,000 MEN & WOMEN OUT OF EMPLOYMENT

Millions of Capital, honestly invested with the
sanction of the law, will be confiscated.

**IF THIS BILL IS PASSED, WHAT TRADE
WILL THEN BE SAFE?**

TRUE TEMPERANCE WILL IN NO WAY BE ADVANCED.

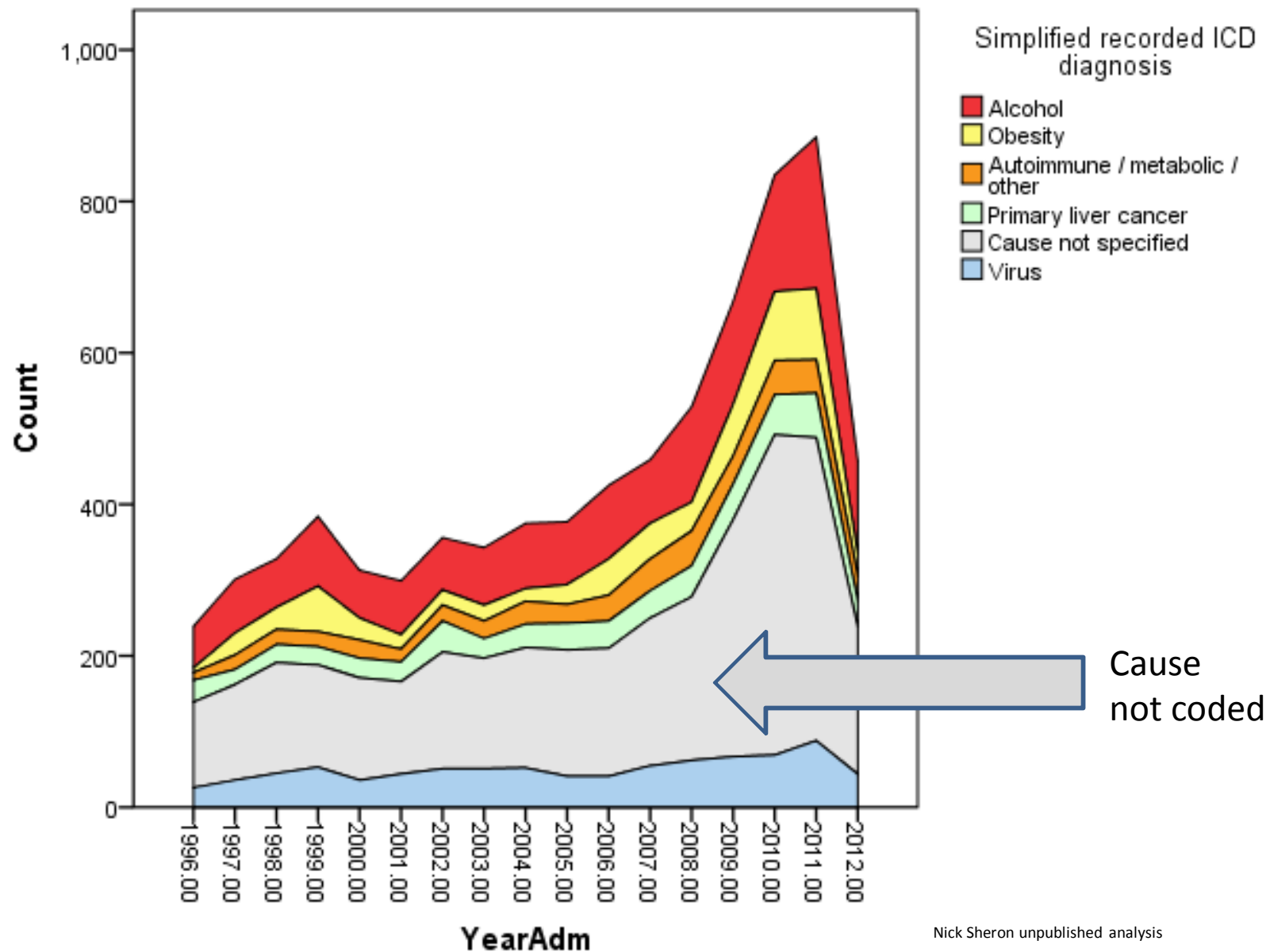
Six Miles walk for a Glass of Beer on
Sunday, and a Six Miles walk back,

AND
**YOUR BEER WILL COST
YOU MORE.**

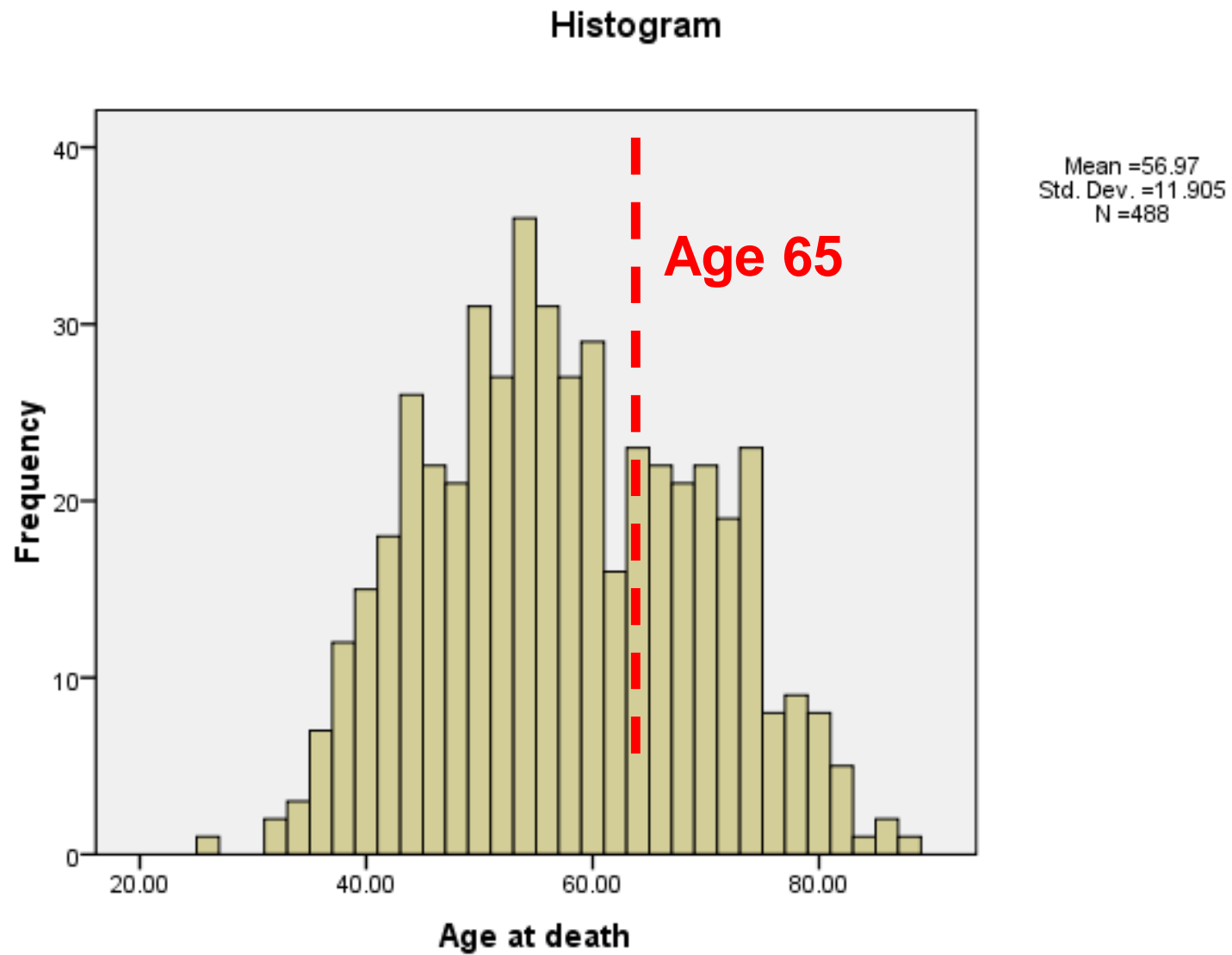
Is THIS ENGLISH JUSTICE?

IT IS FOR YOU TO SAY.

Aetiology of Southampton liver admissions from coding



488 Southampton patients with ALD 1996-2008



"Can you read me 'The Night Before Christmas'
before I go to bed, Daddy?"

TO KEEP THEIR SECRET, MILLIONS OF ILLITERATE ADULTS ARE FORCED TO MAKE UP STORIES.

Help Smirnoff end illiteracy in America.

Illiteracy in this country is a major problem. It presents a painful reality to over 27 million adults. And it's not just books and newspapers that are closed to them. They find themselves shut out of the mainstream of our society.

To put an end to this tragedy, Smirnoff has begun a national campaign. And one of the most important things we are doing is making a major contribution to Literacy Volunteers of America.

As a grass-roots organization of volunteers, they're dedicated to making sure every adult American is able to read. To achieve that goal, they need all the help they can get.

We invite you to join with us and make your own contribution to this extremely worthy cause. You can send your tax-deductible contributions to: Literacy Volunteers of America, Box H, 5295 Widewater Parkway, Syracuse, NY 13214.

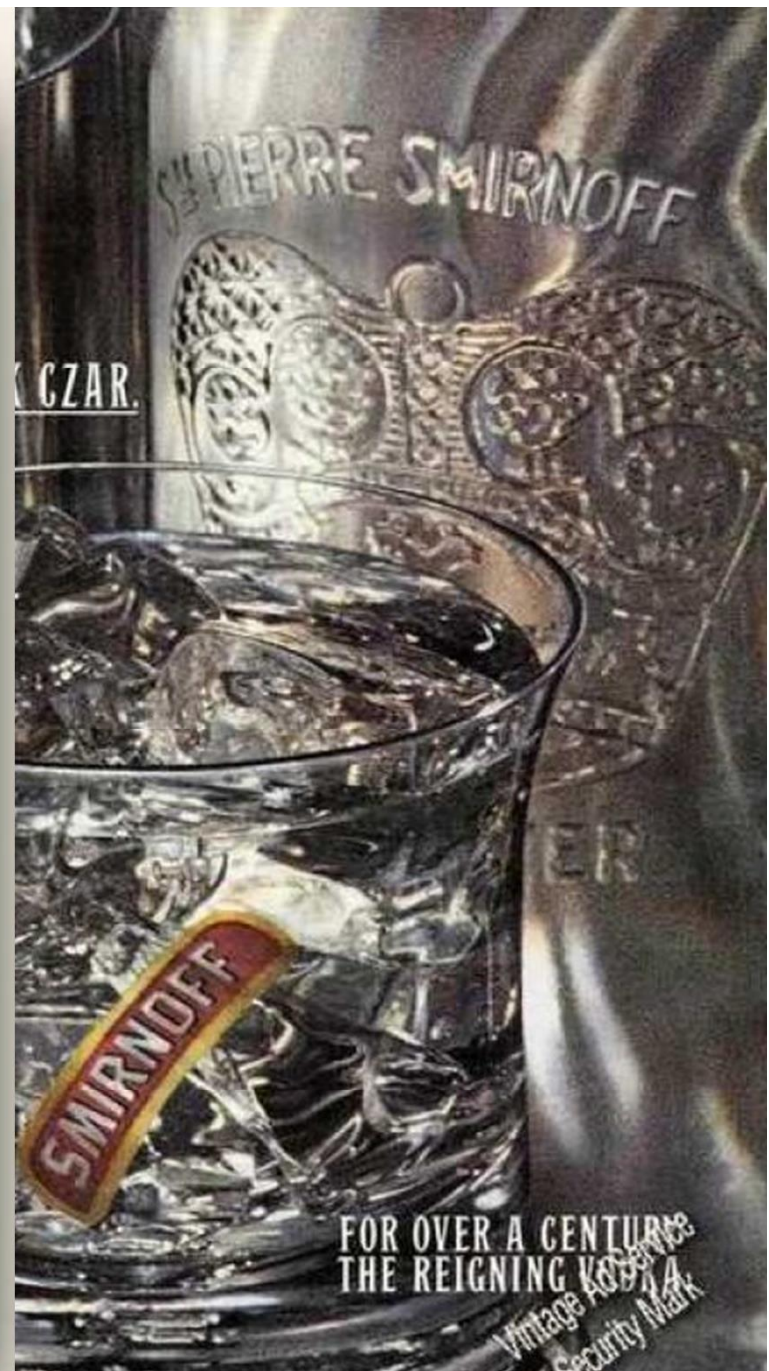


Please give whatever you can. Every dollar helps these volunteers teach adults to do something so many of them desperately want to do.

Read to their children.

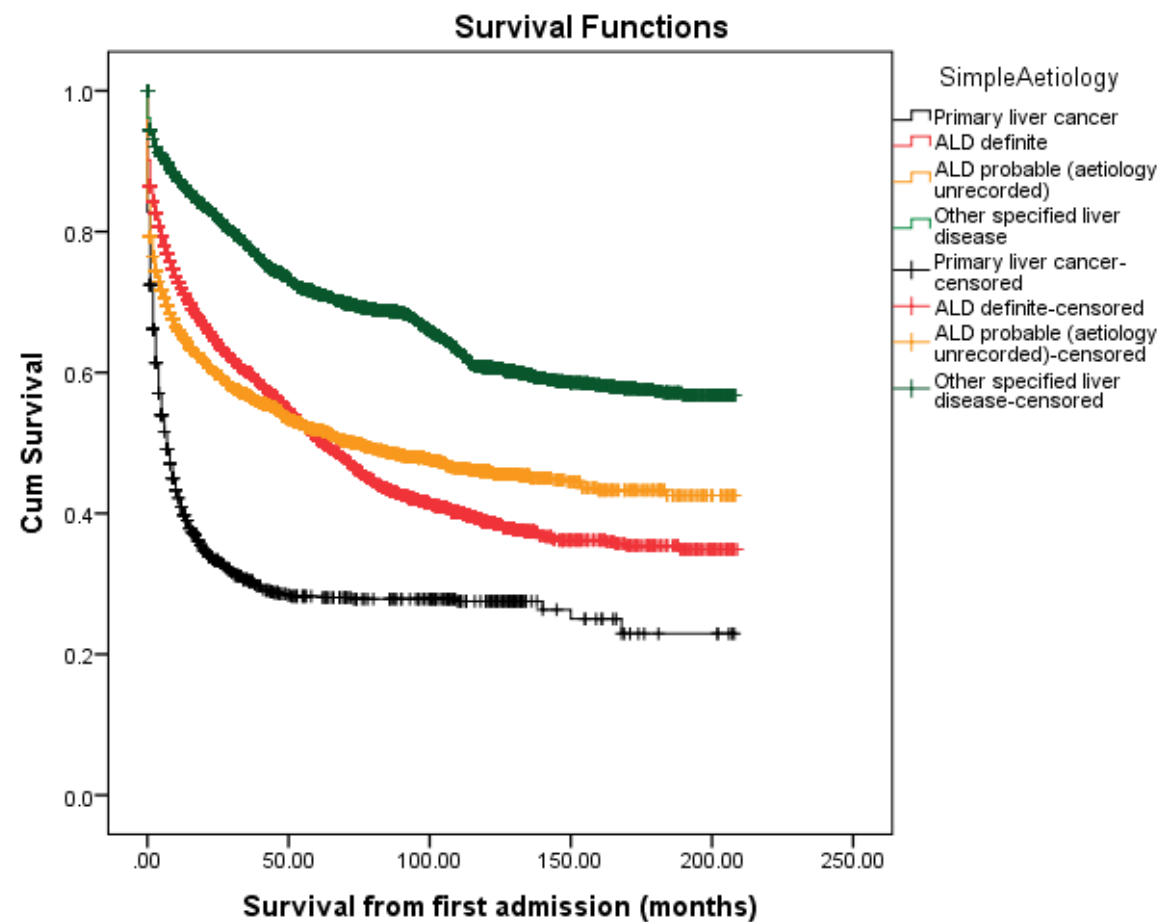
SMIRNOFF

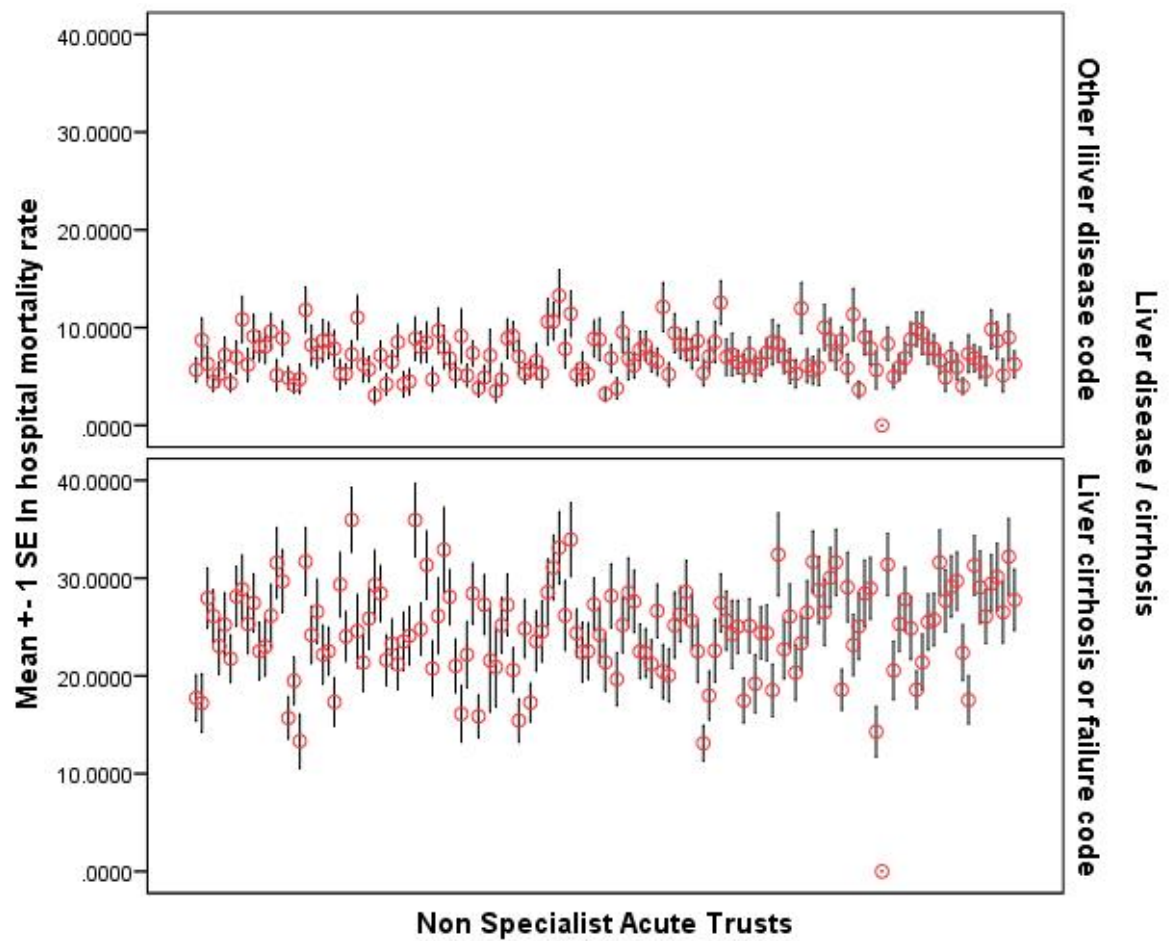
The Reigning Vodka

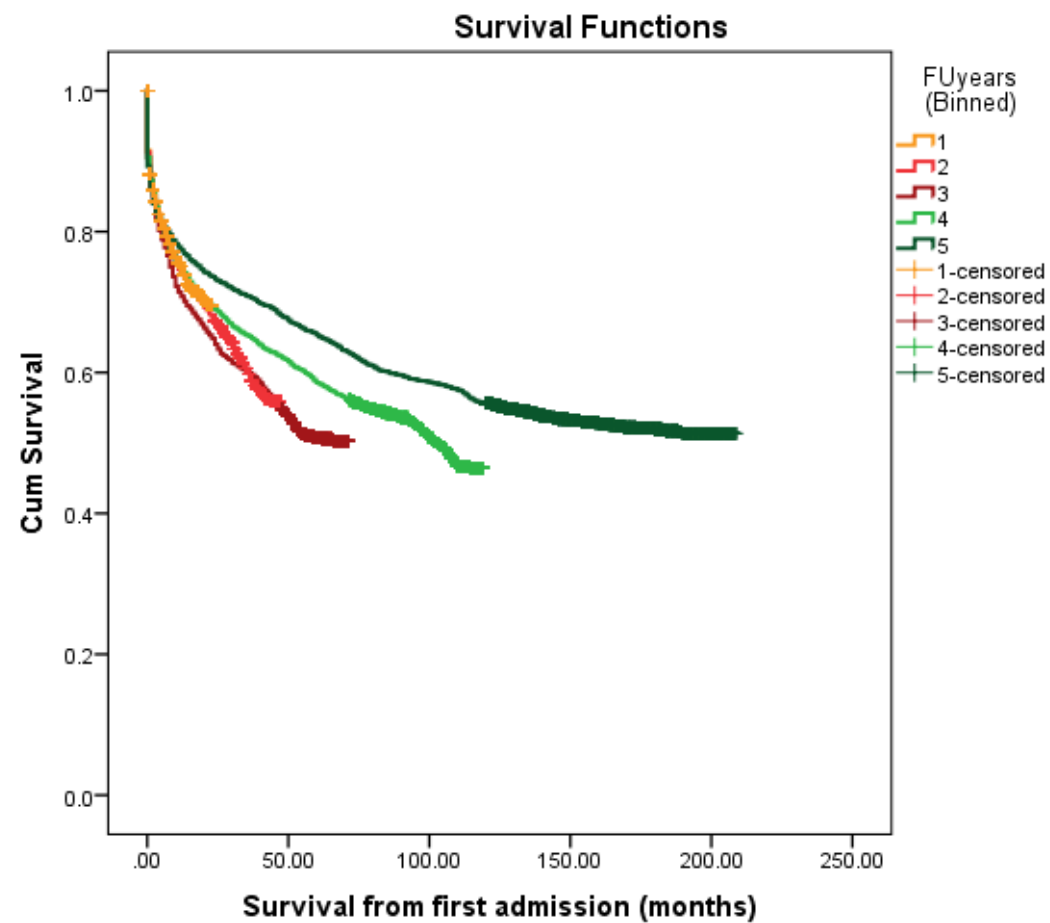


FOR OVER A CENTURY
THE REIGNING VODKA

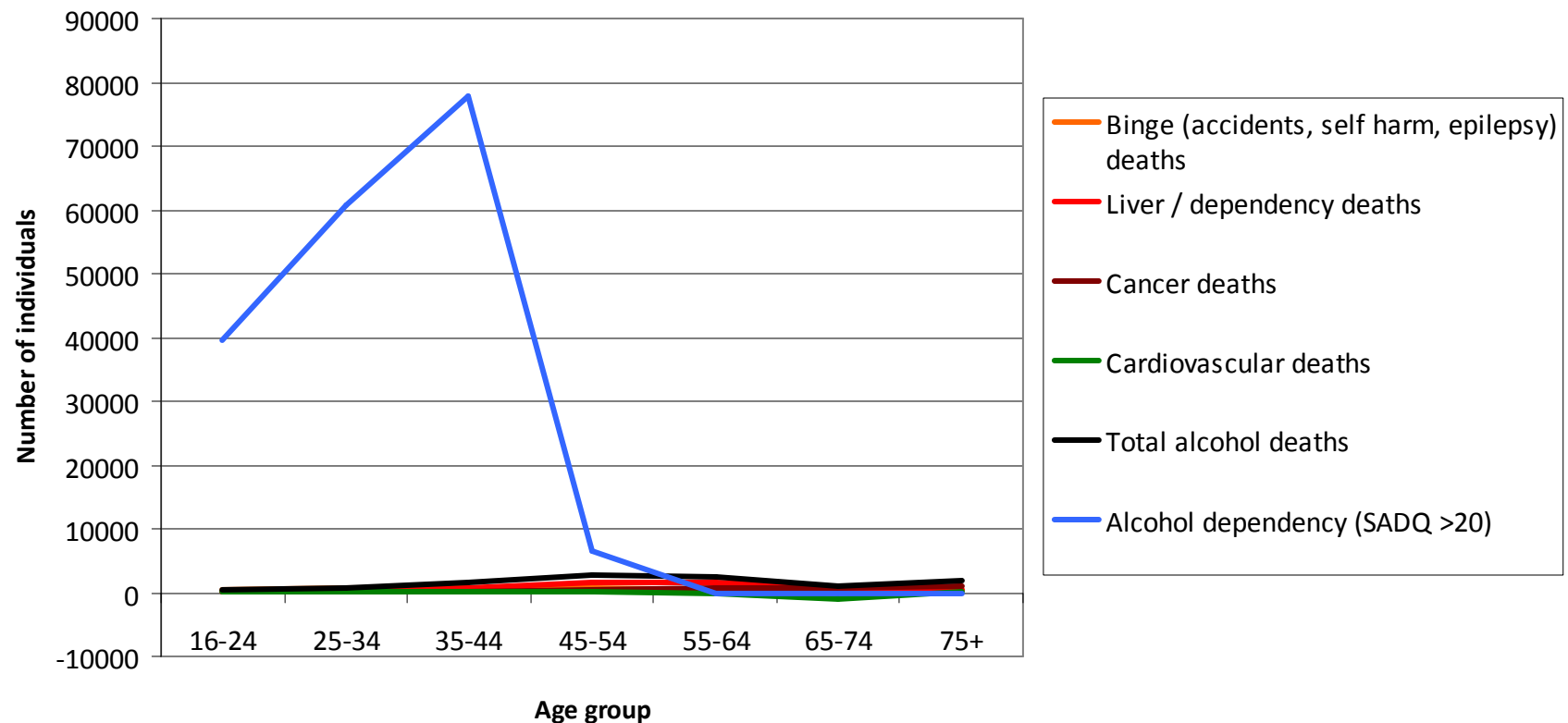
Vintage Ad Service
Security Mark







**Number of alcohol attributable deaths in England by age group (2005)
together with total number of people with significant alcohol dependency**



Note this prevalence of addiction and incidence of death – an unfair comparison purely to illustrate the different ages ranges; addiction is a disease of youth.