

Addressing the medical consequences of alcohol misuse: A liver specialist's perspective

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My background

- May 2010 to Cons Hepatologist, Portsmouth
- 2007 to Cons Hepatologist, University Hospital of Wales, Cardiff
- 2004 to Associate Hepatologist, Scripps Clinic Liver Center, San Diego, California
- Specialist training, North Thames rotation
- Lecturer in Medicine at RPMS/Hammersmith
- Research PhD, Imperial College London
- Junior doctor Liverpool, Sheffield, Cambridge

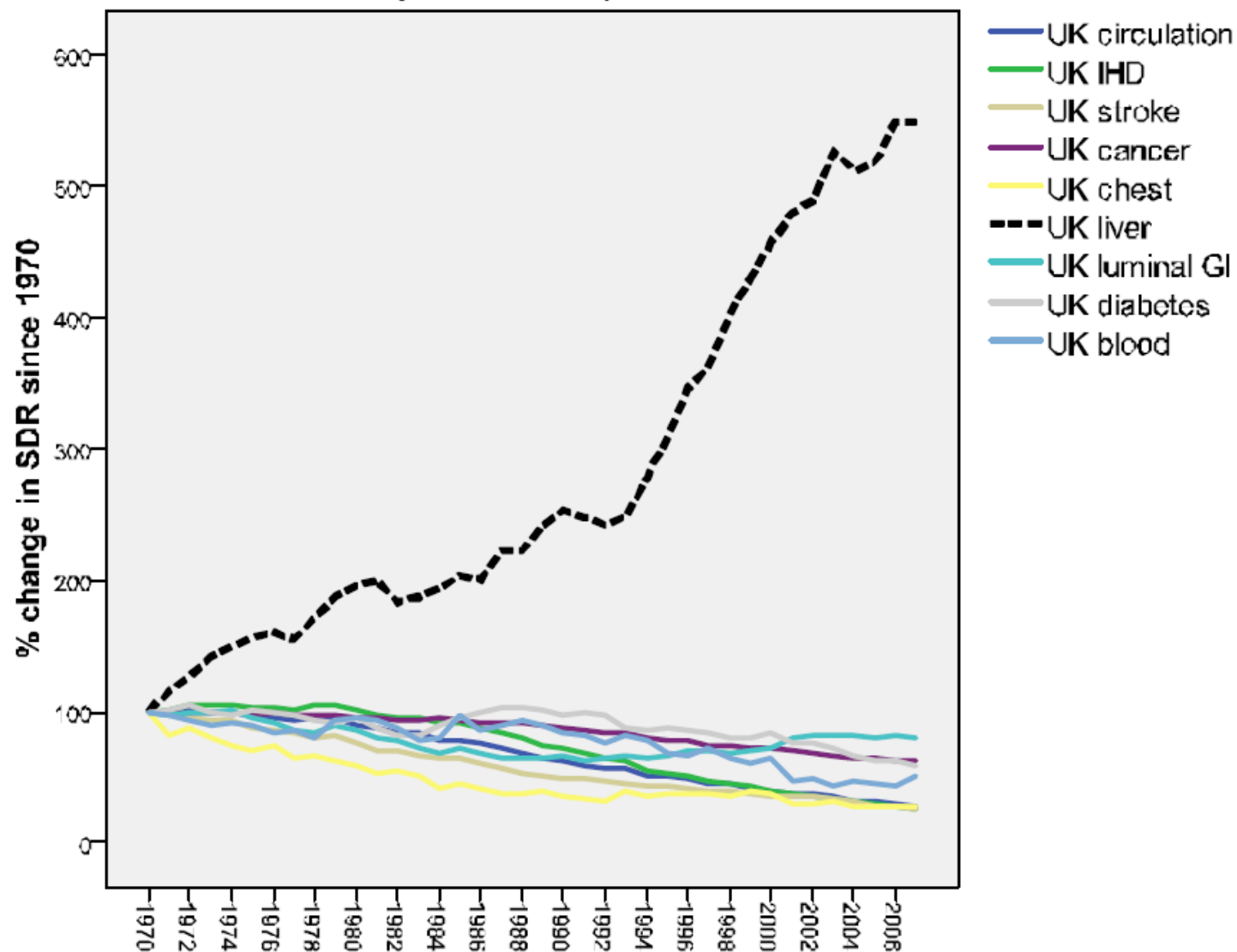
Overview

- National and local issues
- Disease burden due to alcohol
- Preventative hepatology
- What are we doing?
- National and local initiatives

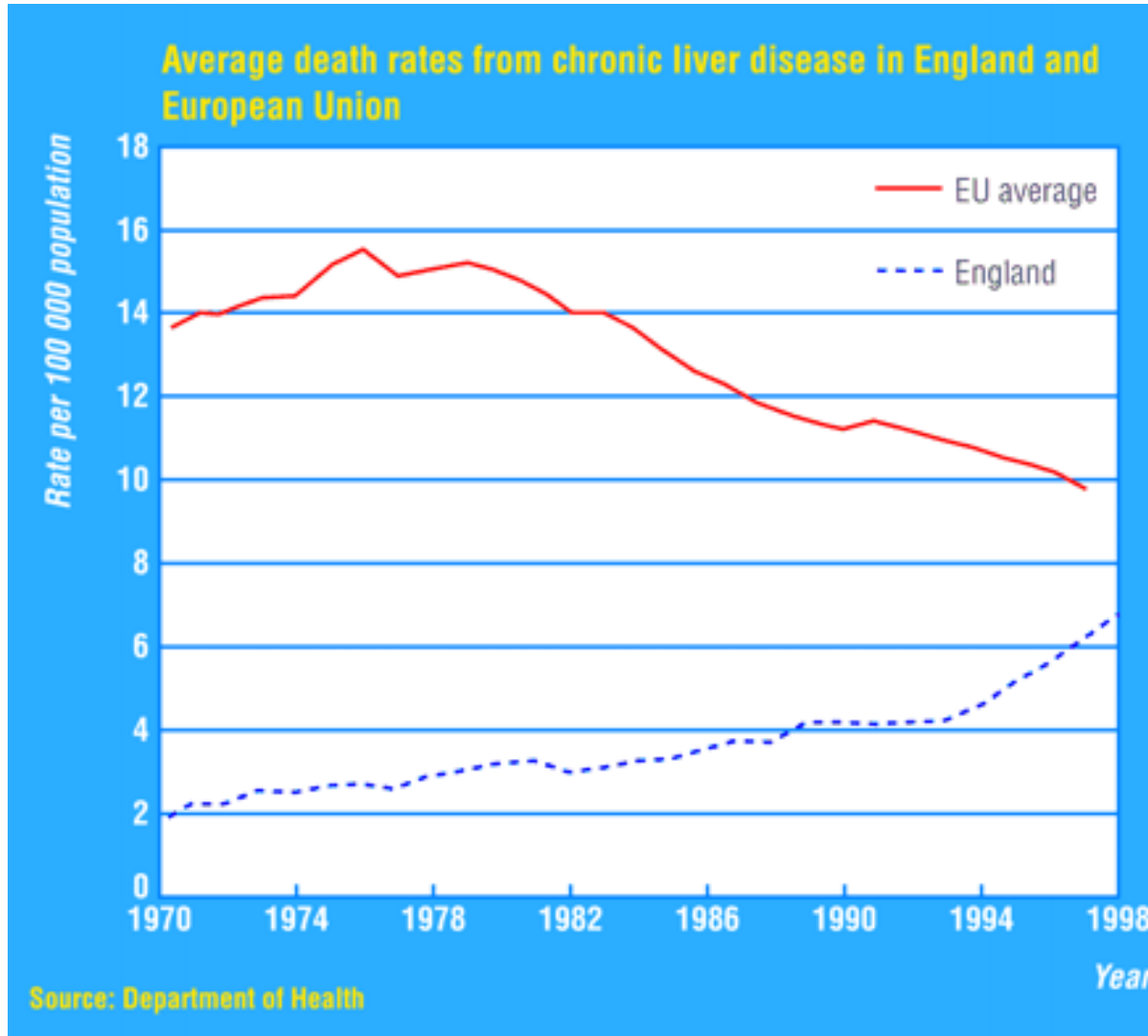
Increasing prevalence of chronic liver disease in the UK



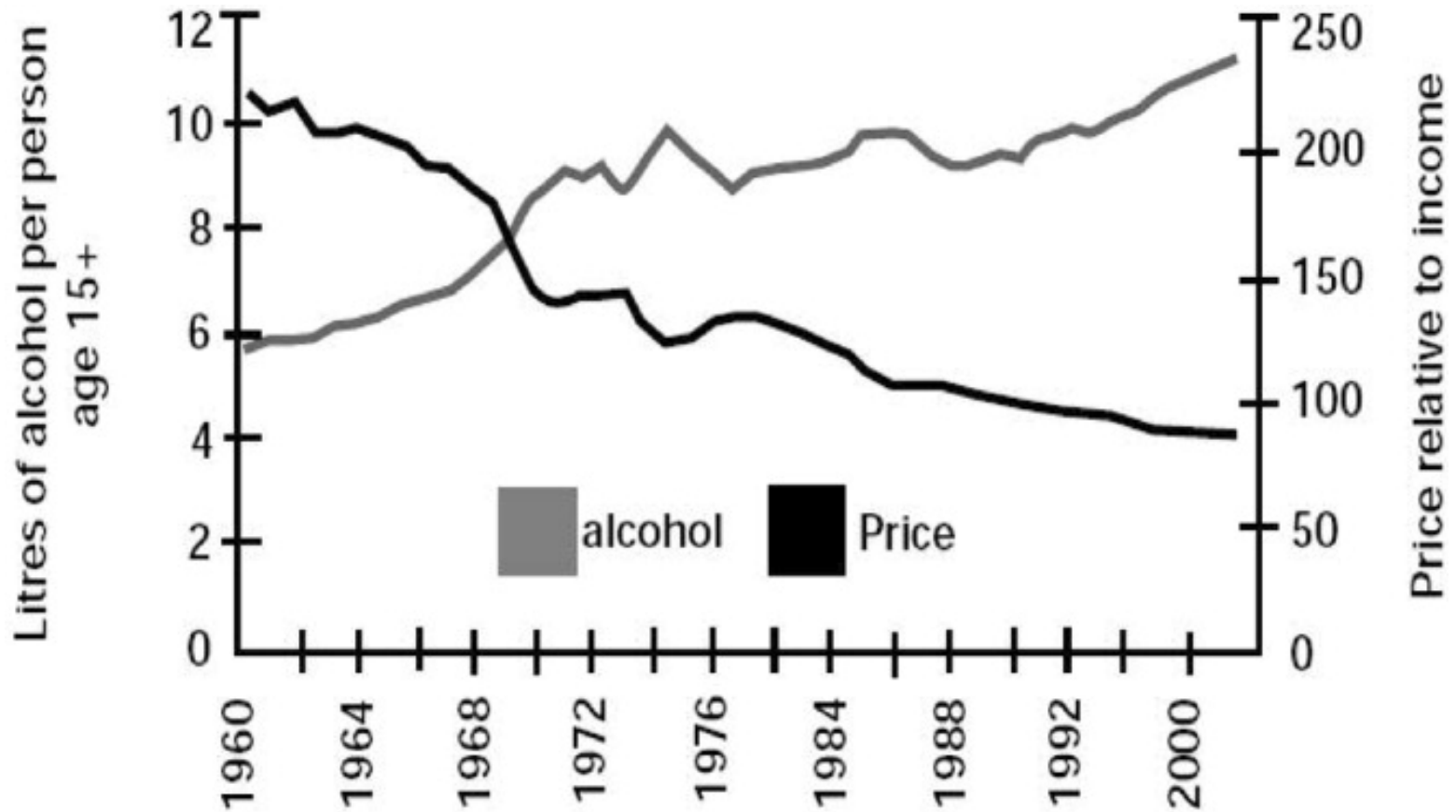
UK under 65 standard death rate for various diseases (1970 = 100%)



Mortality from chronic liver disease in England



UK alcohol consumption



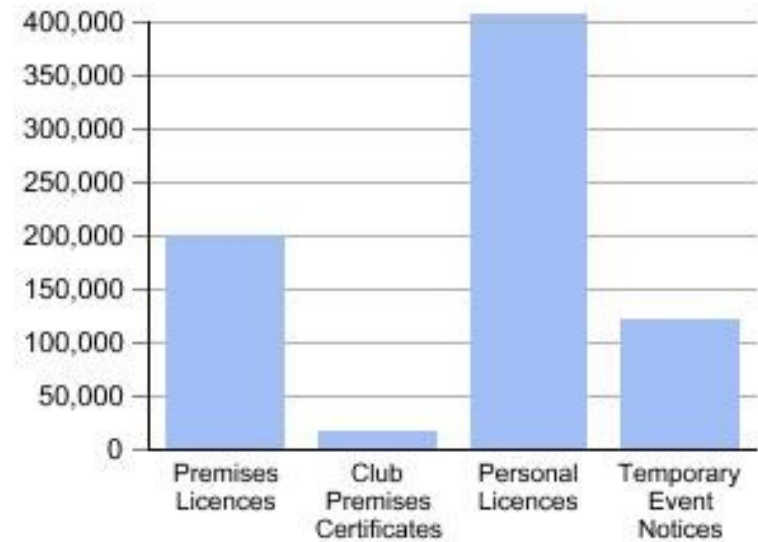
Data from Tighe, A. (ed.) *Statistical Handbook 2003*

Alcohol use: Price vs availability



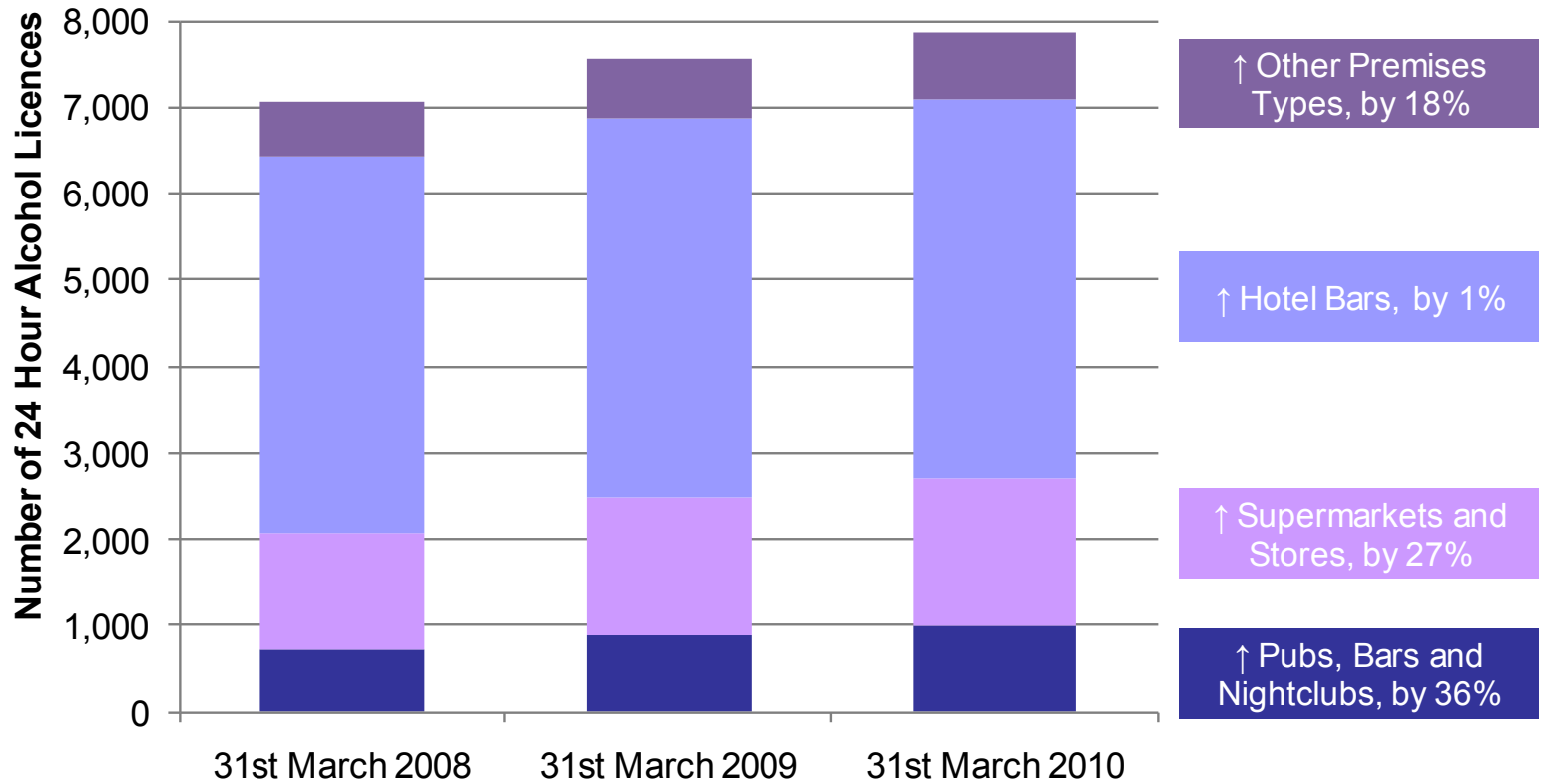
Tonge Moor Road, Bolton. Sept 2010

Number of Licences or Certificates in force, England and Wales 31st March 2010



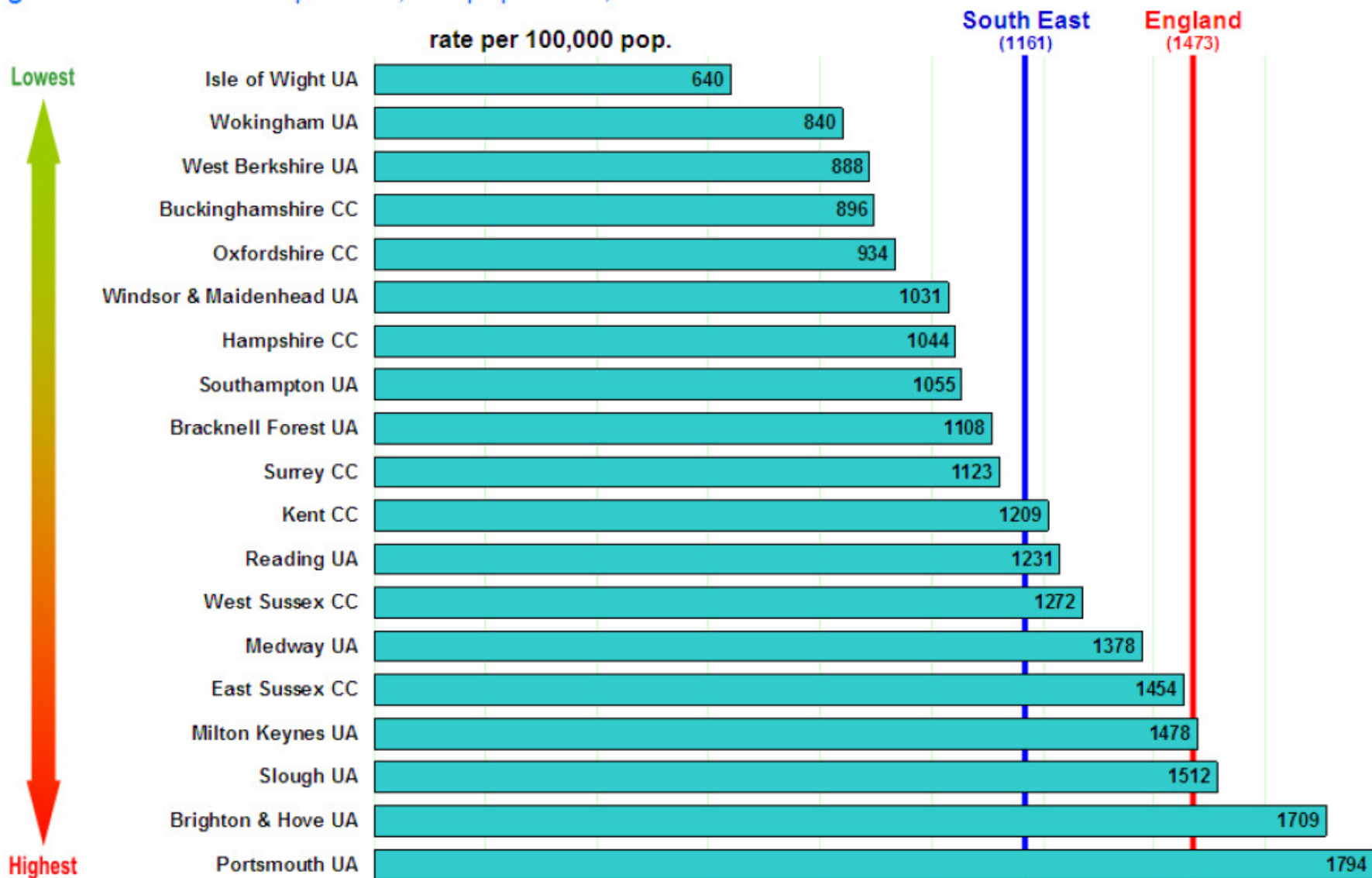
DCMS National Statistics Bulletin, Sept 2010

Growth of 24 hour drinking

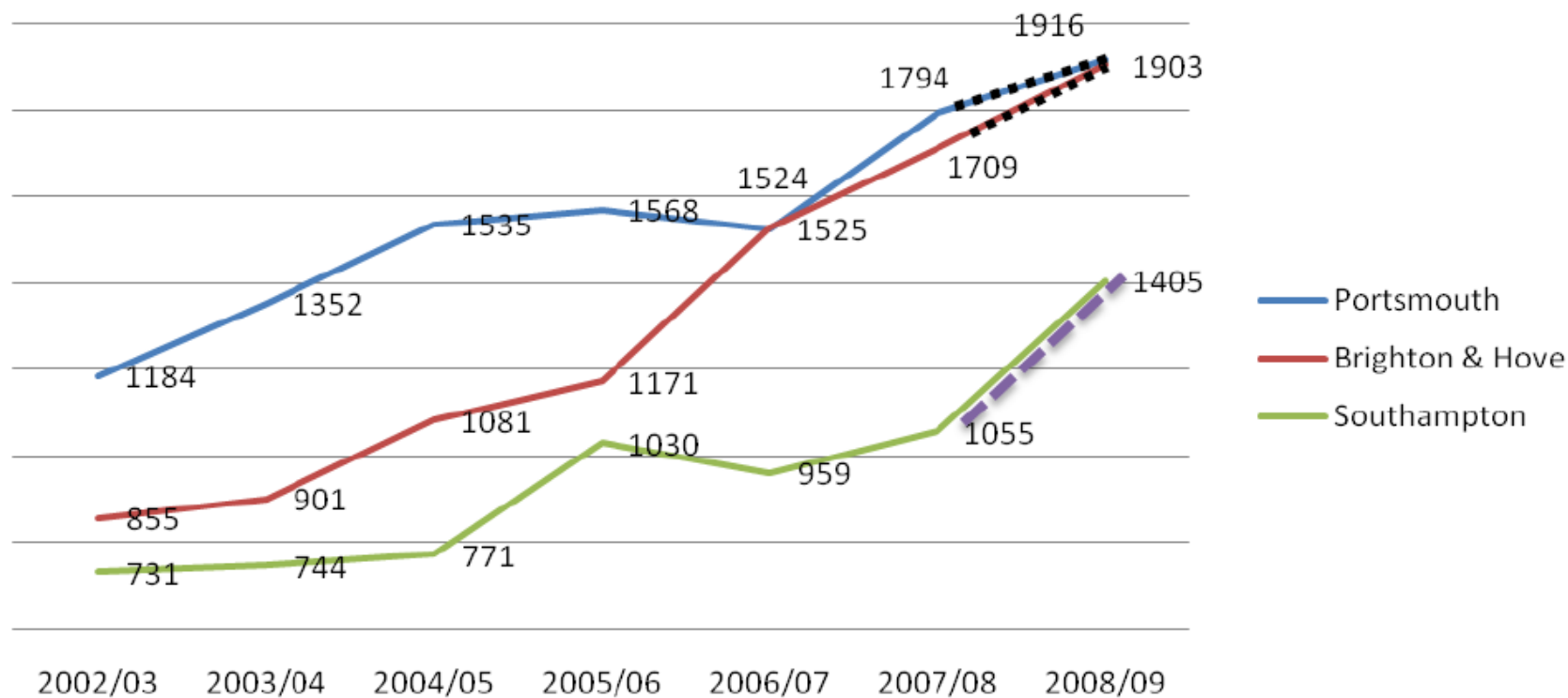


Alcohol related hospital admissions in the South East region, 2007-08

age standardised rate per 100,000 population, UA and CC



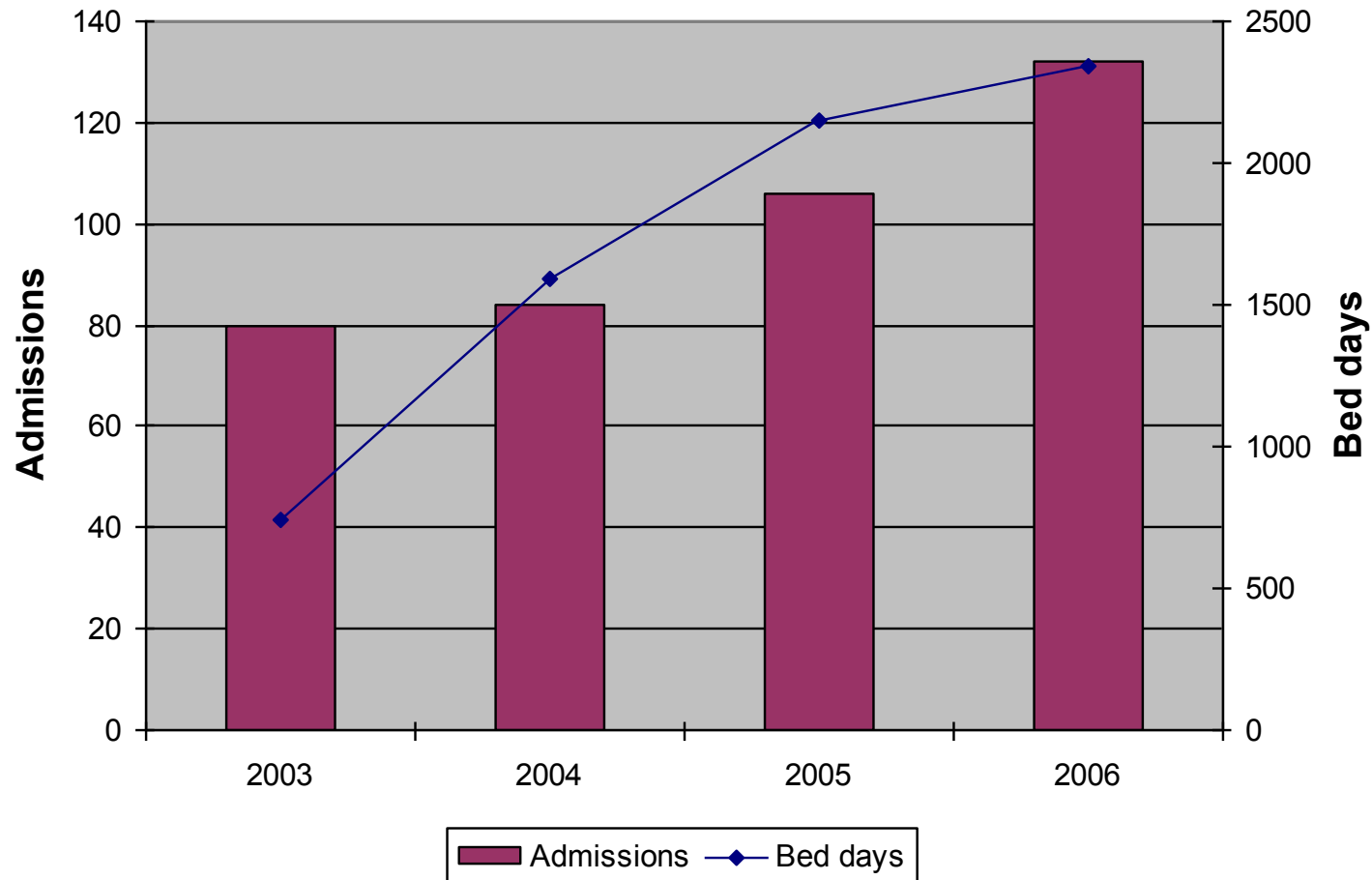
Rate of hospital admissions for alcohol related harm per 100,000 population



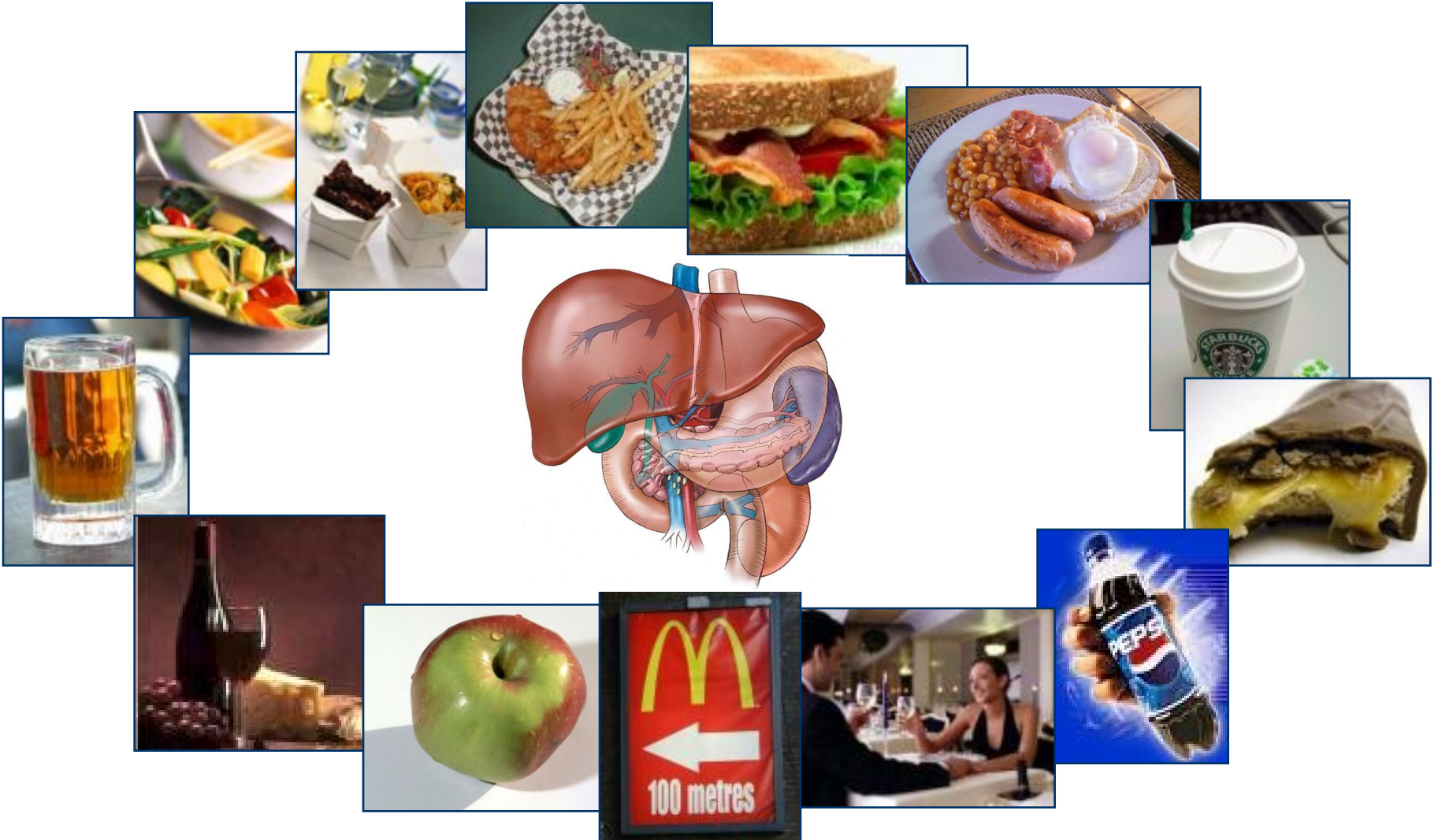
Source: Safer Portsmouth Partnership. *Portsmouth Alcohol Strategy 2009-2013*

QAH: Admissions and bed occupancy due to alcoholic liver disease

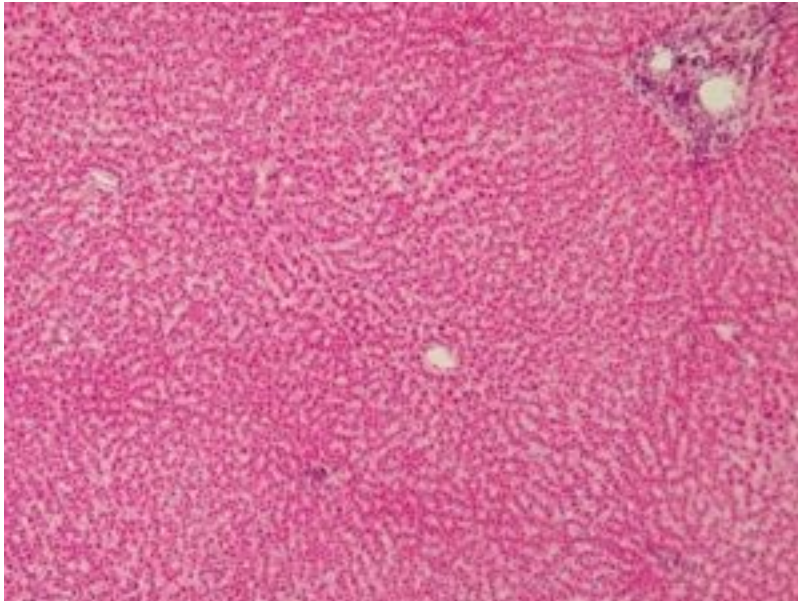
Healthcare Resource Group GO7: Alcoholic fatty liver, alcoholic hepatitis, fibrosis, alcoholic cirrhosis for Portsmouth Hospitals NHS Trust.



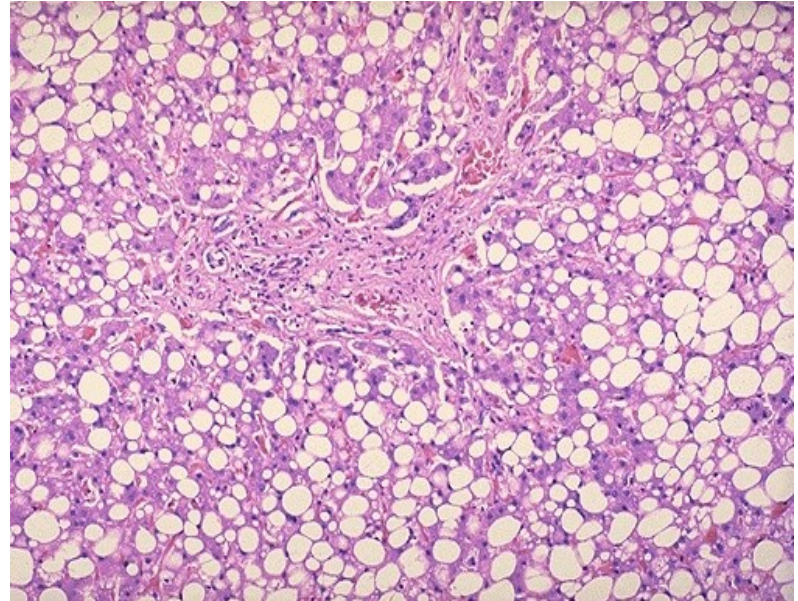
Fatty liver disease



Non-alcoholic fatty liver disease



Normal liver

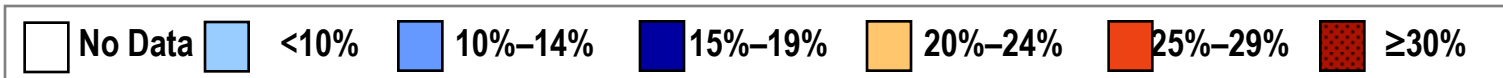
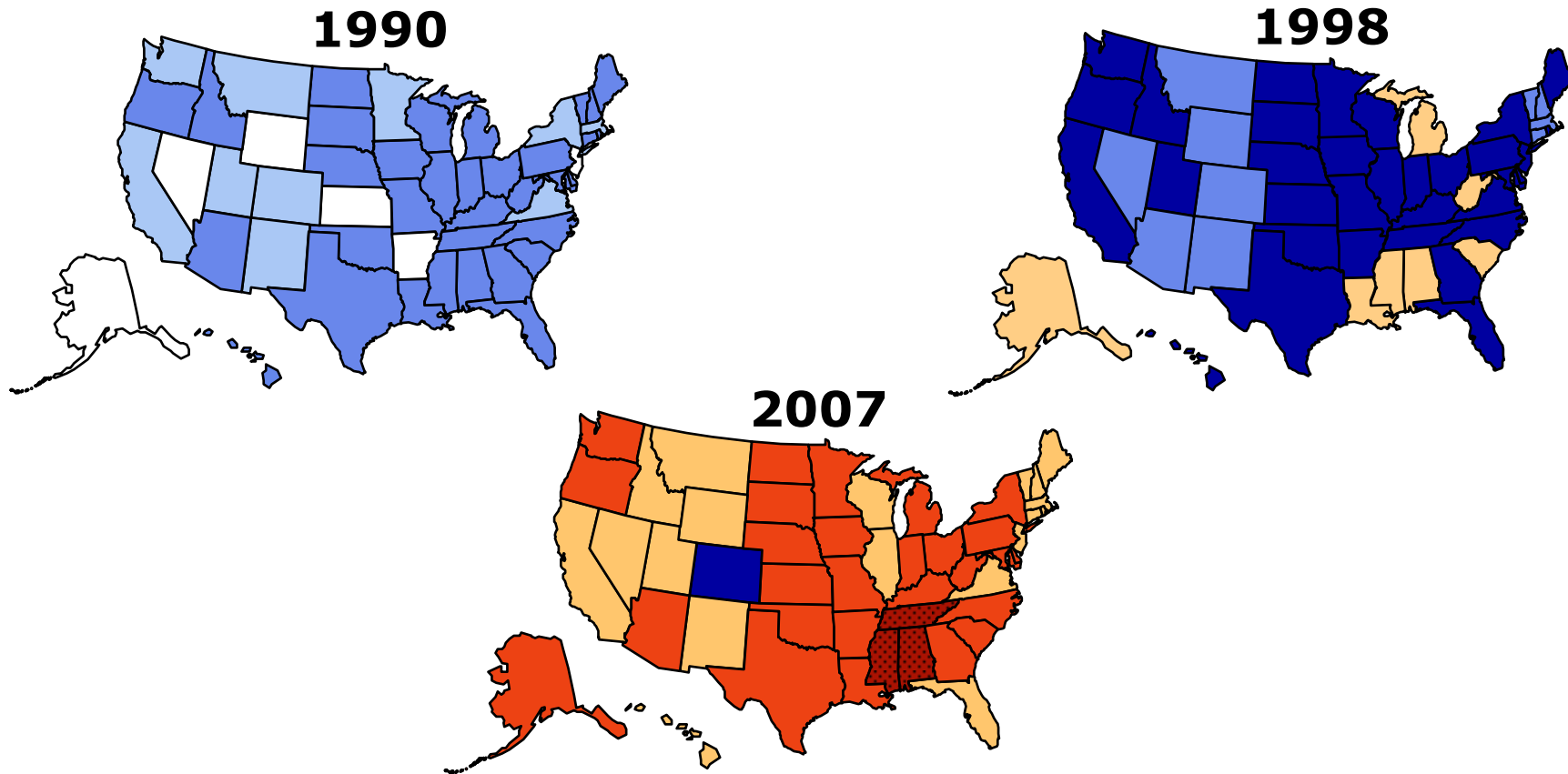


Fatty liver (NAFLD)
Steatohepatitis (NASH)

Obesity Trends Among U.S. Adults

BRFSS, 1990, 1998, 2007

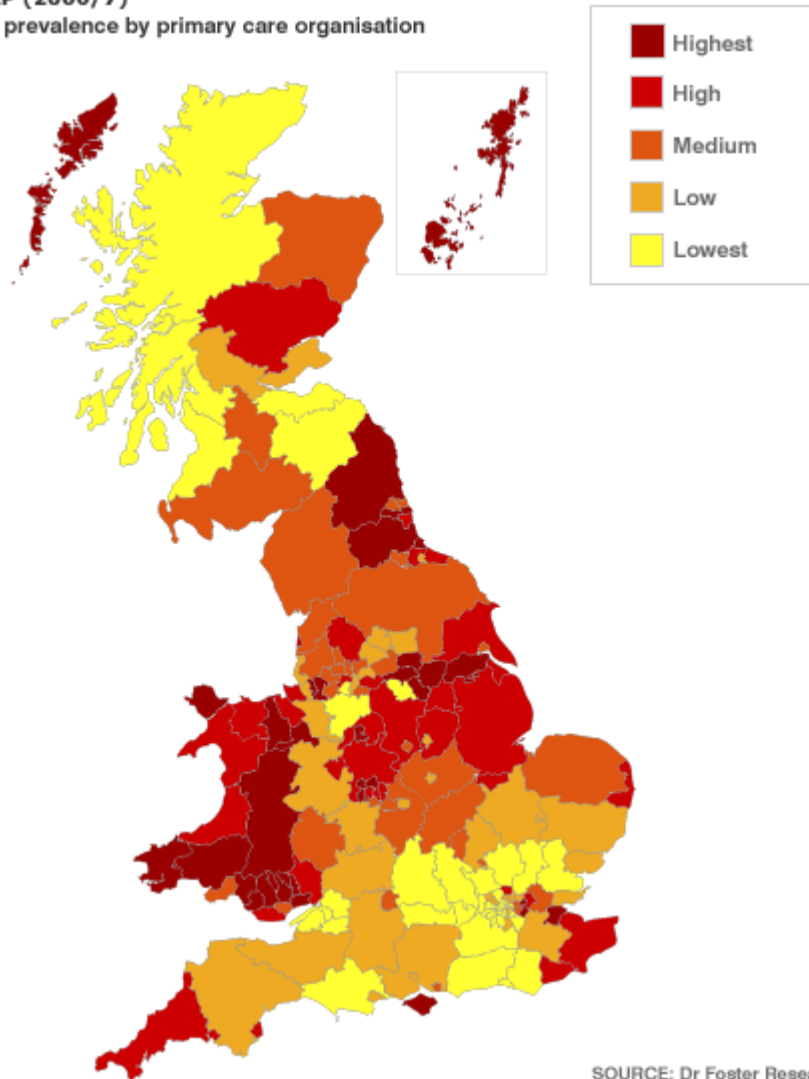
(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)



Obesity map of Britain

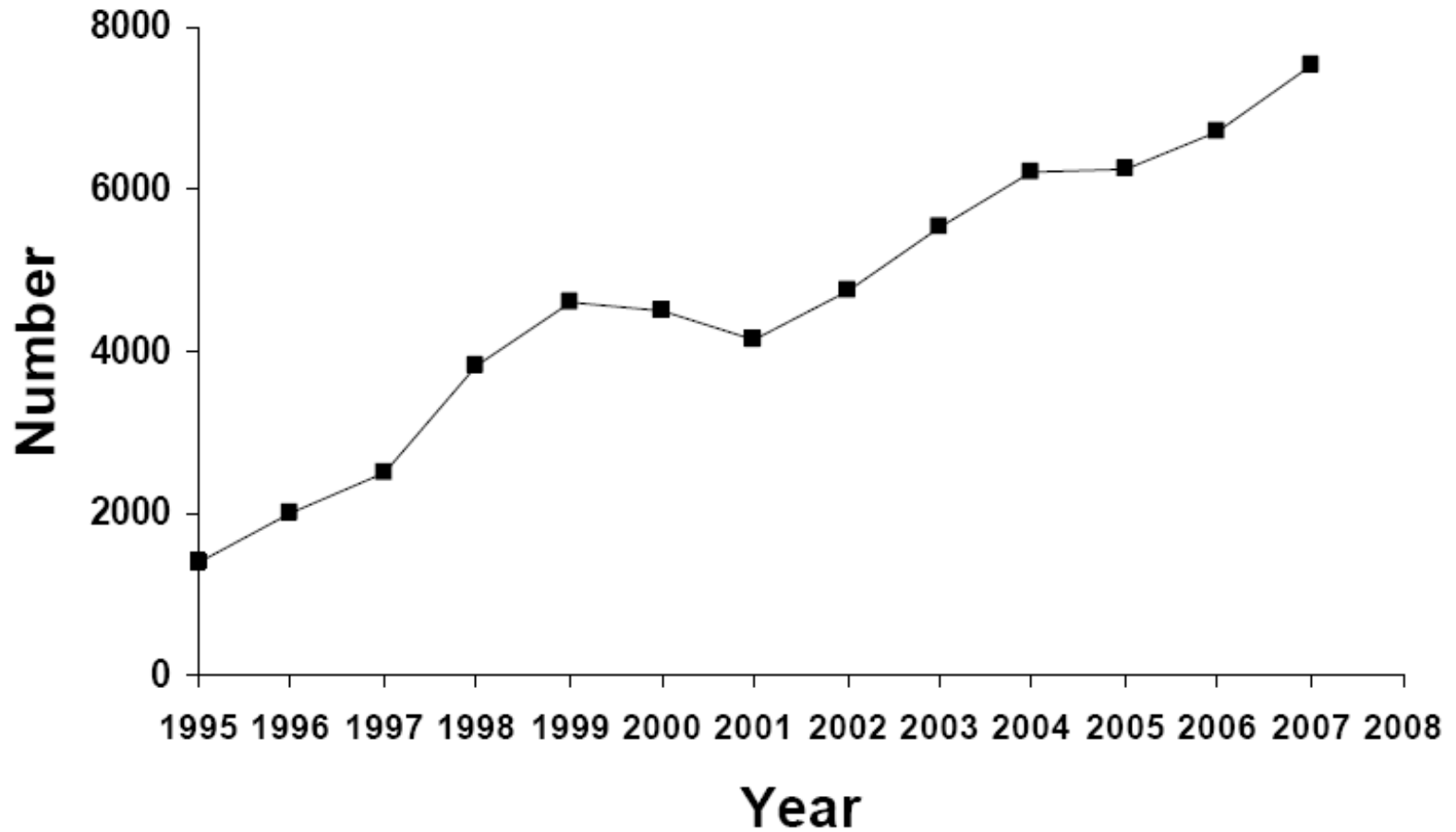
FAT MAP (2006/7)

Obesity prevalence by primary care organisation



SOURCE: Dr Foster Research

Number of Lab Reports of HCV



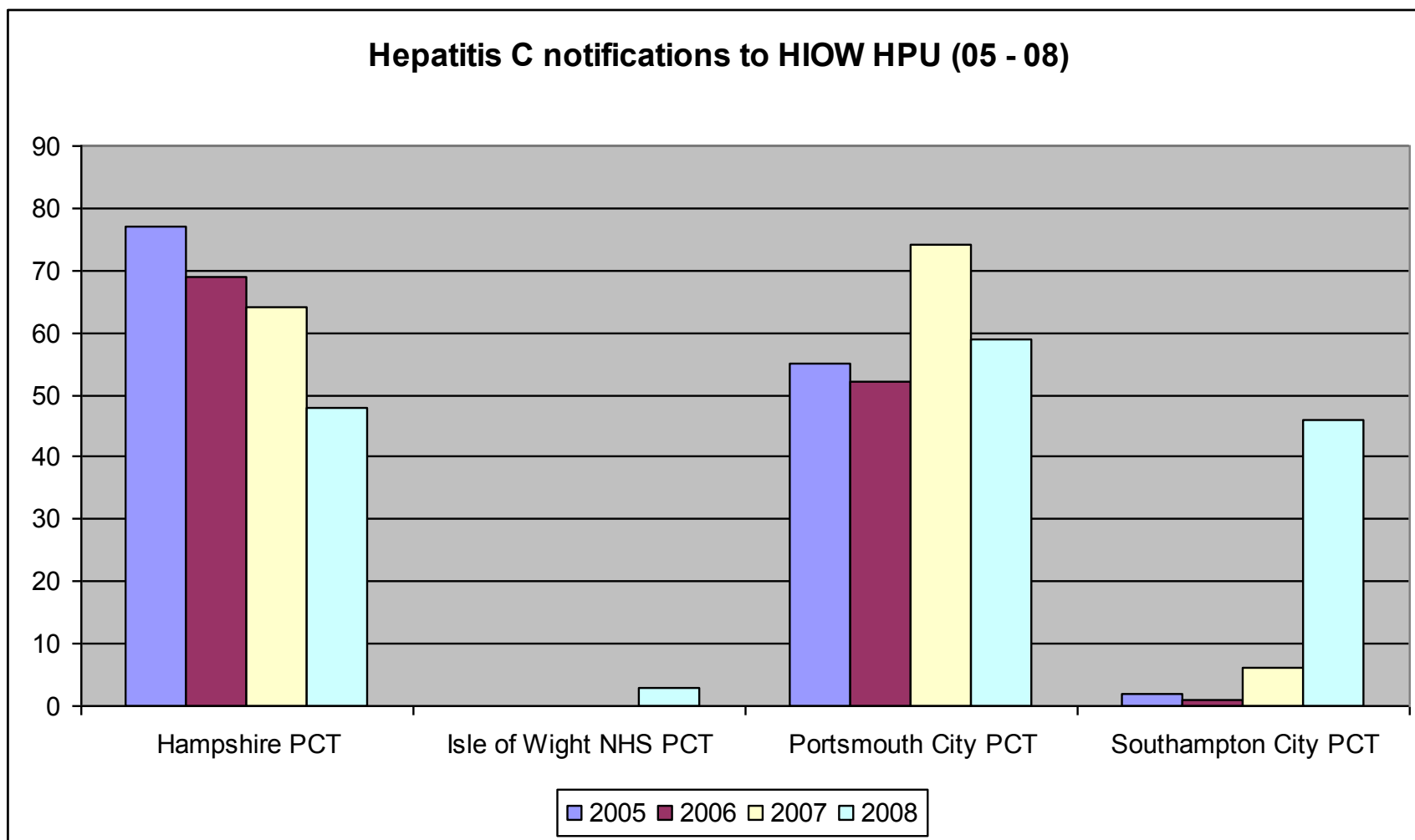
New cases of Hepatitis C per year. Source: *Health Protection Agency, 2009*

Local prevalence of Hepatitis C

(from Health Protection Agency)

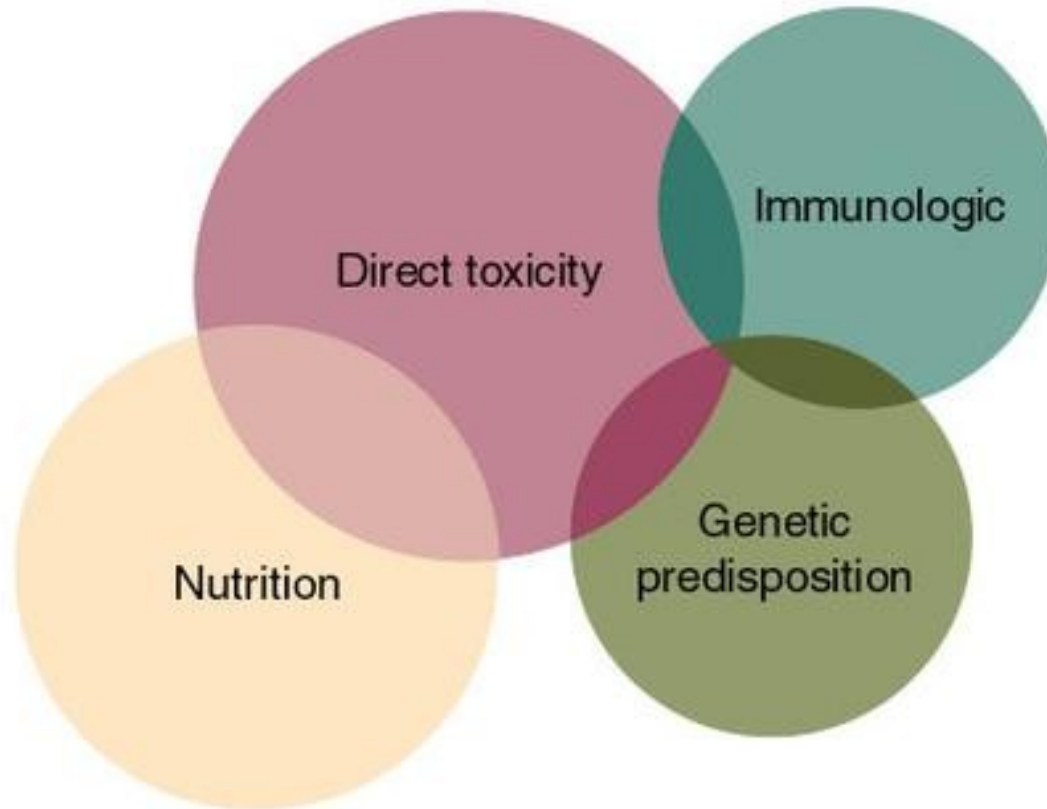
Estimated prevalent infection (n)	PCT				Total
	Southampton	Portsmouth	Hampshire	I.O. Wight	
IDUs	75	316	480	114	985
Ex-IDUs	321	268	1639	169	2397
Non-IDUs	115	96	589	61	861
Born in high prevalence countries (Indian Sub-Continent)	74	41	76	4	195
Prisoners	N/A	35	81	115	231
Total infected population	585	754	2866	463	4669

Local incidence of chronic Hepatitis C 2005-8



Laboratory confirmed cases of HCV by area. Data from Hampshire & IOW Hepatitis C Needs Assessment, 2009

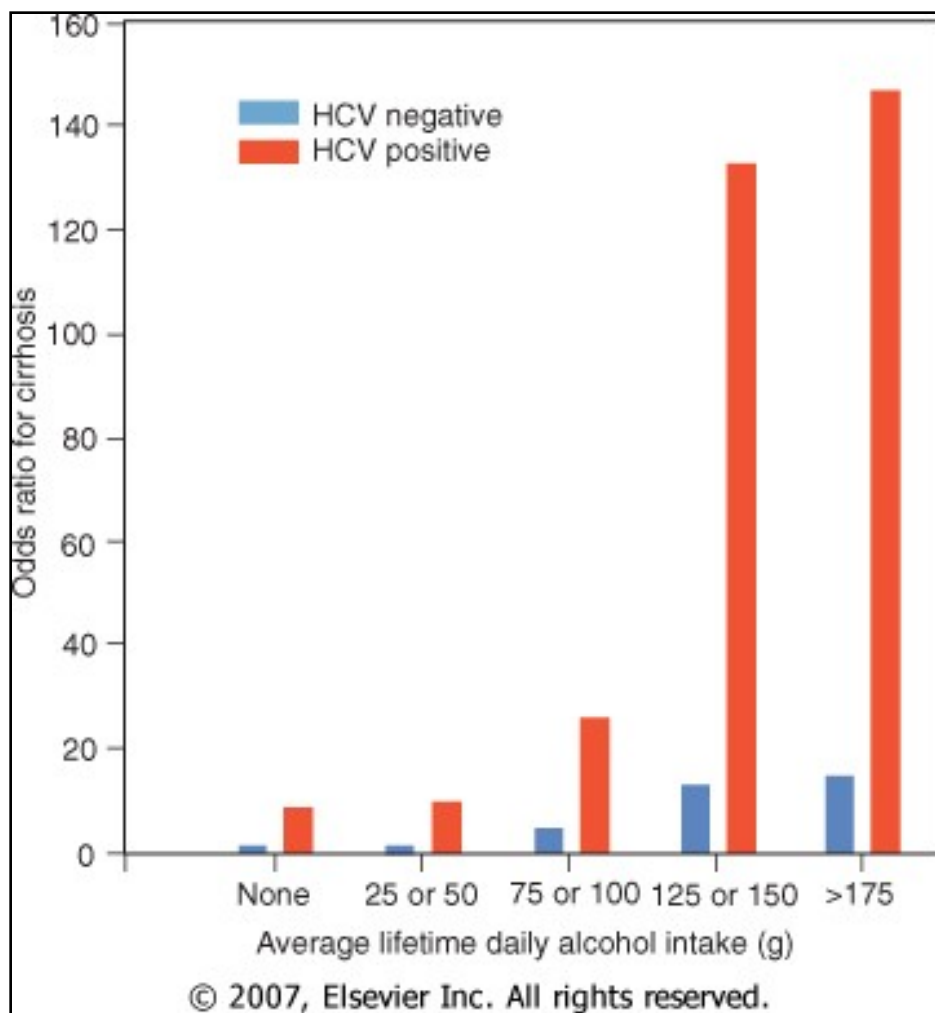
Mechanism of liver damage due to alcohol



Co-factors that worsen progression of alcoholic liver disease

- Obesity
- Poor nutrition
- Smoking
- Chronic viral hepatitis

Alcohol + Hepatitis C = More cirrhosis



Relative risks of cirrhosis in patients who chronically drink varying amounts of alcohol based on the presence or absence of hepatitis C virus (HCV) infection. (Data from Corrao G, Lepore AR, Torchio P, et al: The effect of drinking coffee and smoking cigarettes on the risk of cirrhosis associated with alcohol consumption. A case-control study. Provincial Group for the Study of Chronic Liver Disease. Eur J Epidemiol 10:657, 1994.)

Progression of Hepatitis C

Risk Factors for Disease Progression

Male sex

Age at infection greater than 40 years

Alcohol consumption more than 50 g/d

HIV coinfection

Hepatitis B virus coinfection

Obesity

Hepatic steatosis

Alcohol

Fatty liver

Hepatitis C

Liver injury

Inflammation & fibrosis

Cirrhosis

Cirrhosis may
take 10-20 years

Variceal bleeding

Ascites & SBP

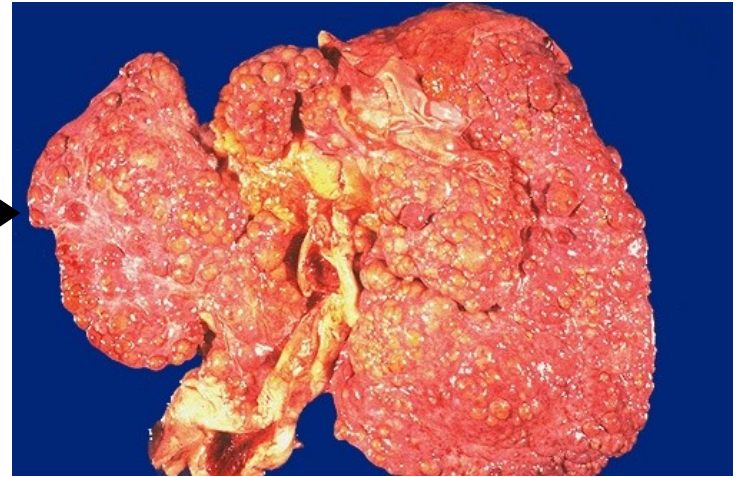
Kidney failure

Septicaemia

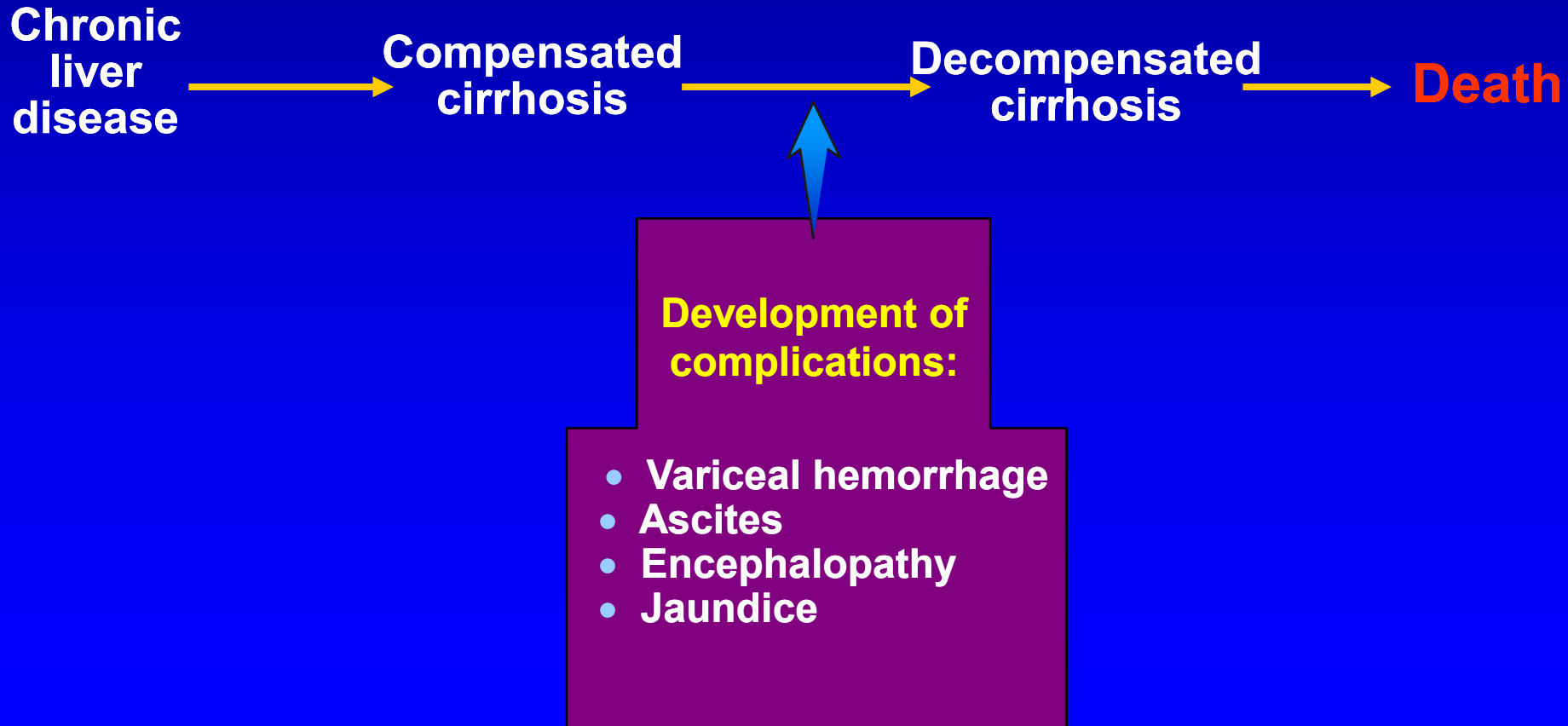
Liver cancer

Encephalopathy

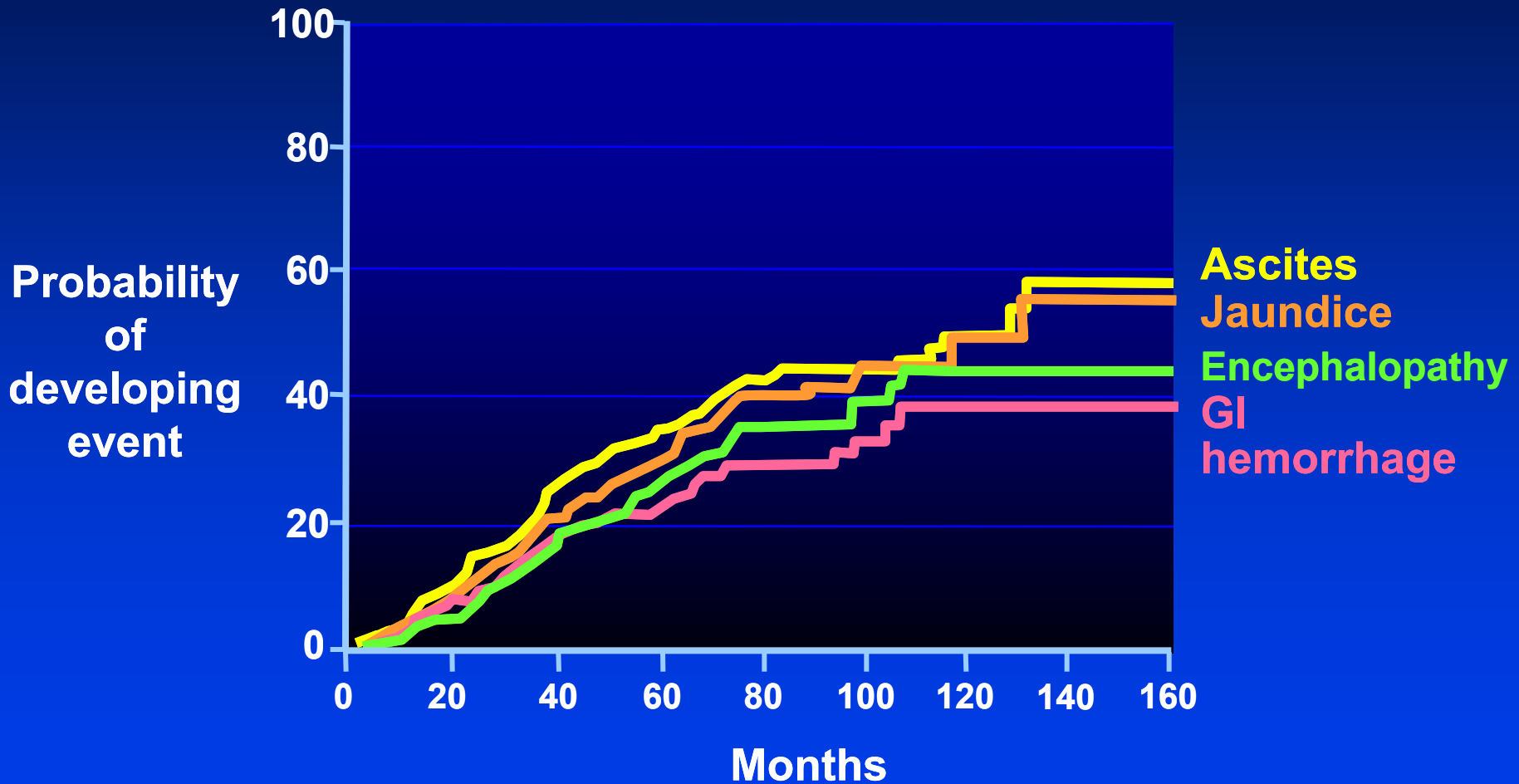
Liver cirrhosis



Natural History of Chronic Liver Disease

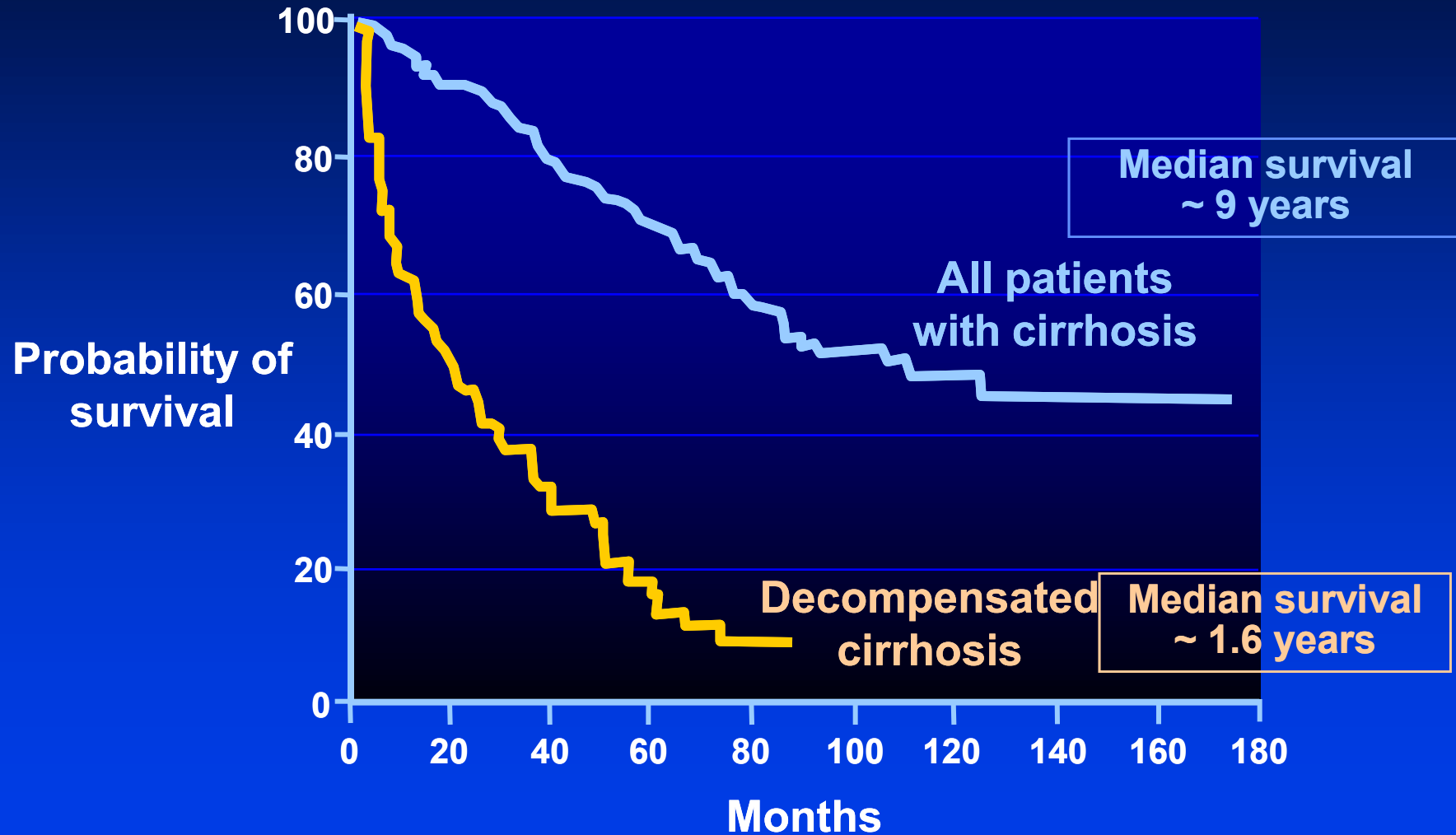


Development of Complications in Compensated Cirrhosis

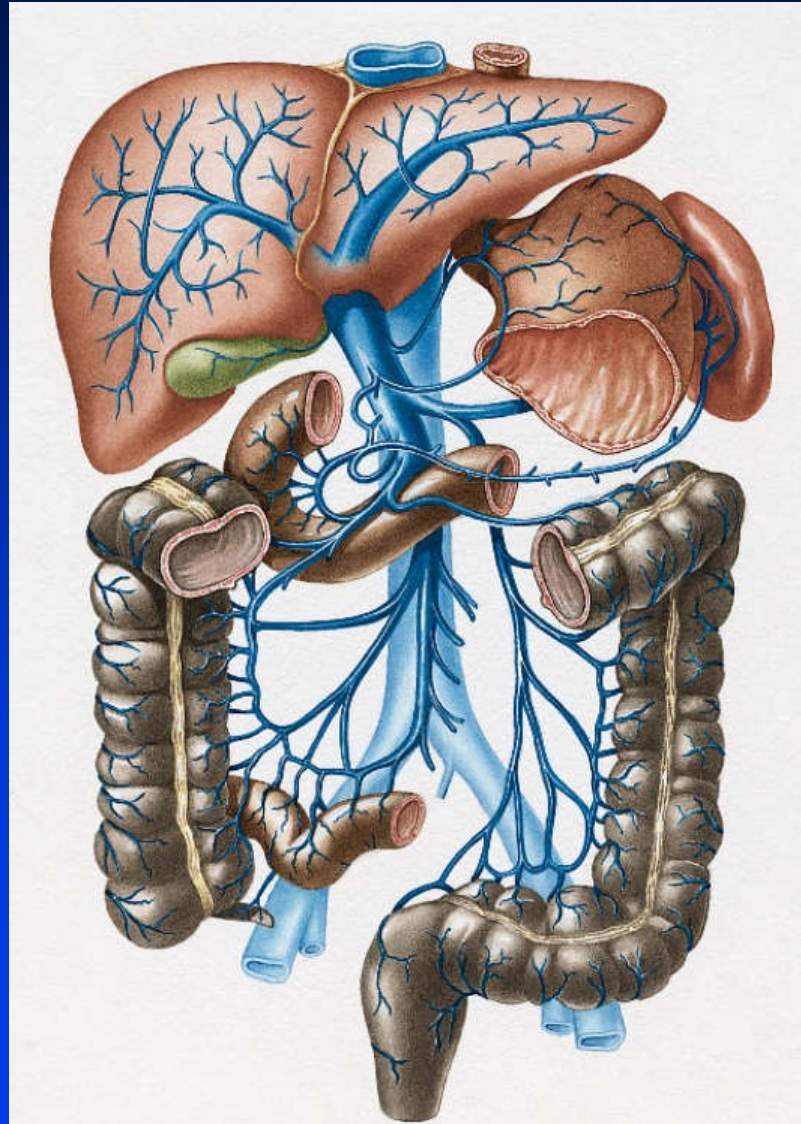


Gines et. al., Hepatology 1987; 7:122

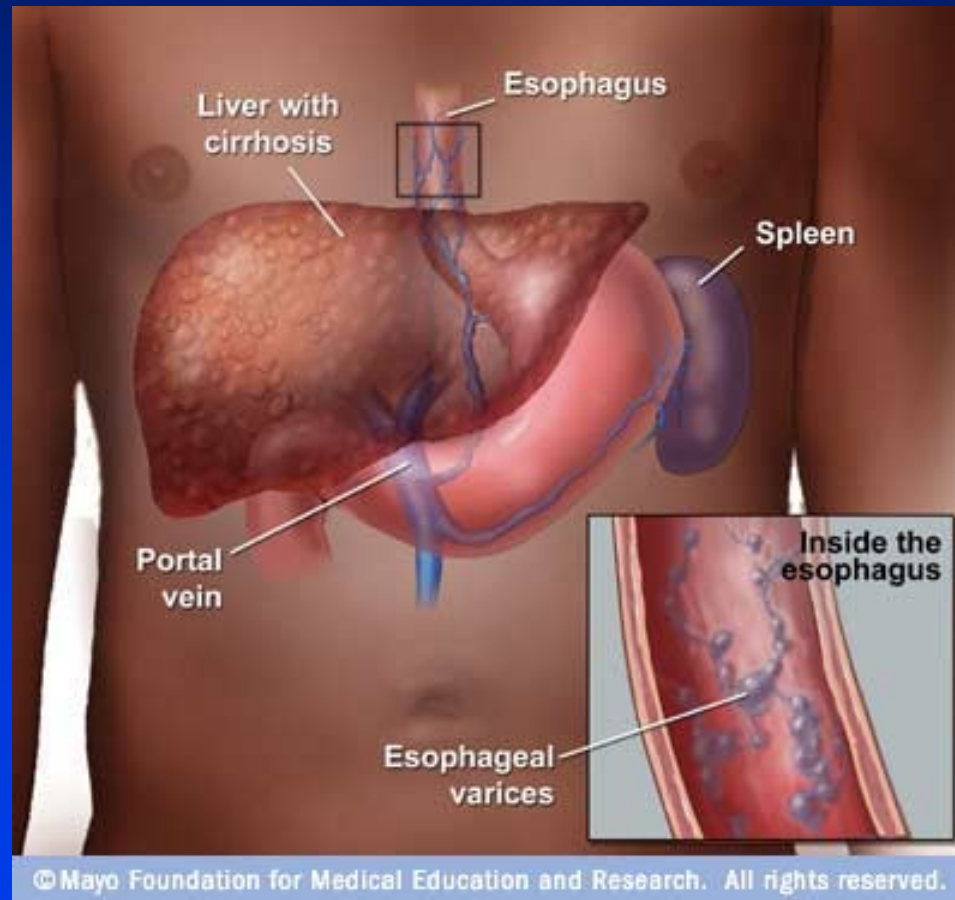
Decompensation Shortens Survival



The portal circulation



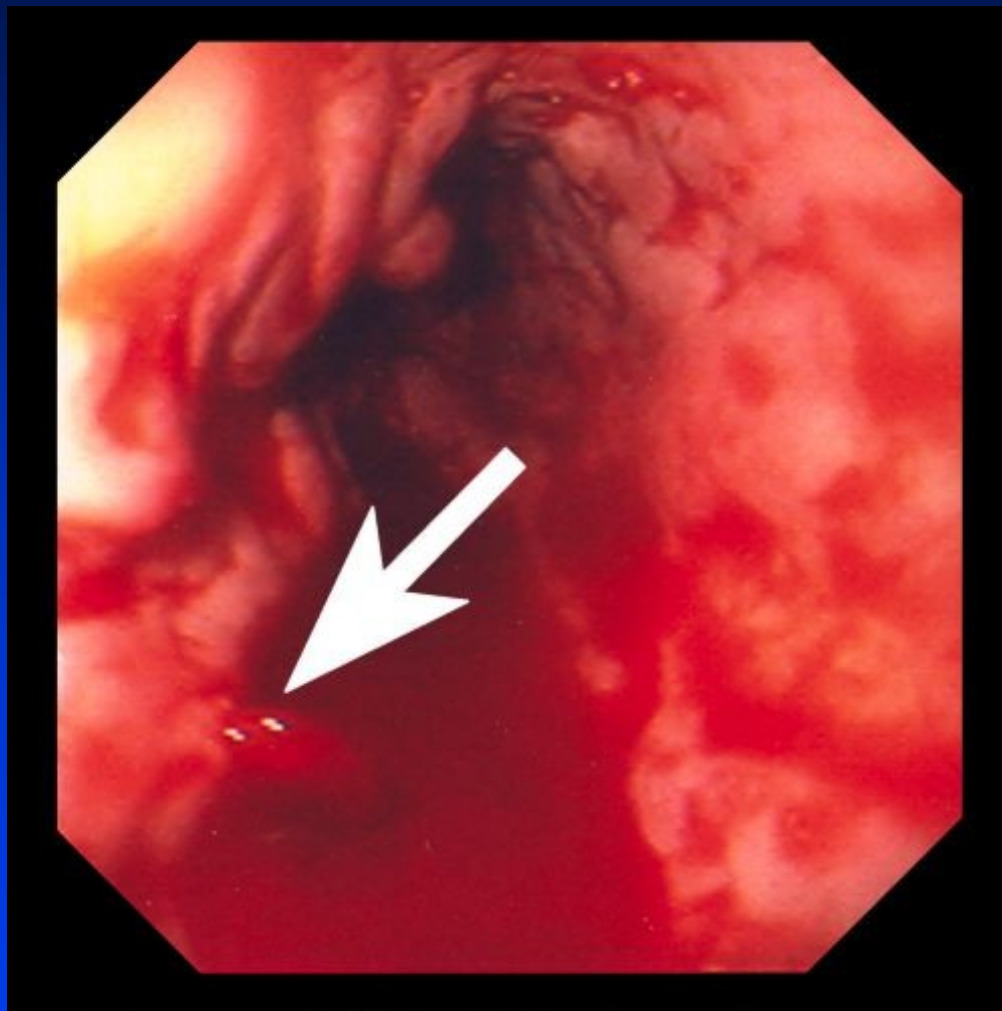
Portal hypertension and bleeding oesophageal varices



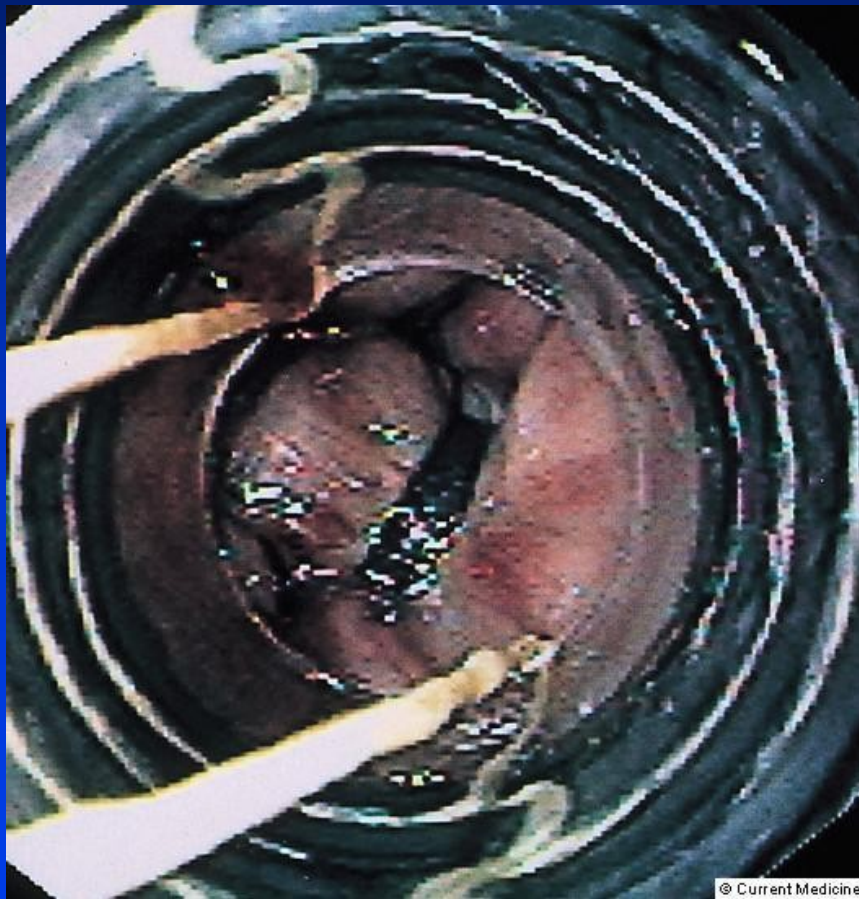
Oesophageal varices



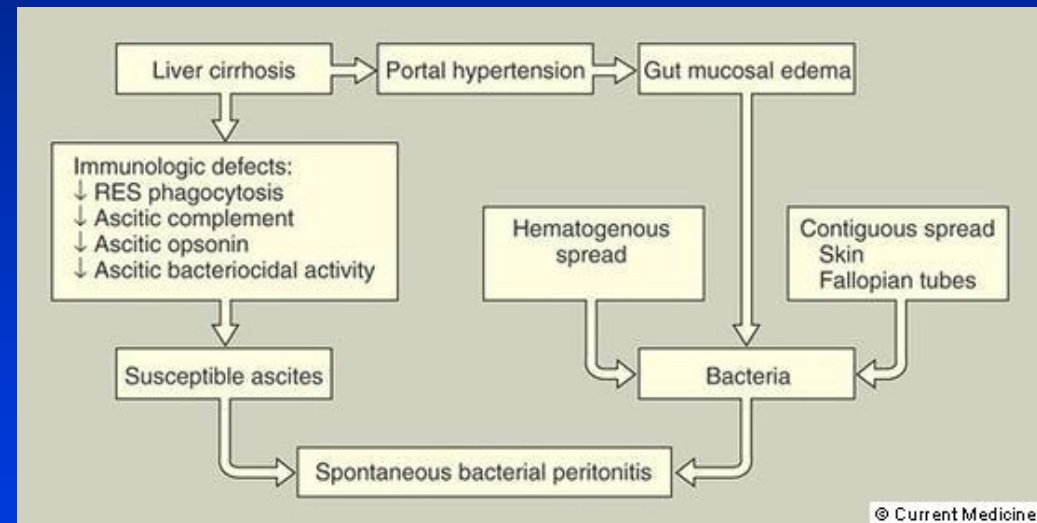
Bleeding oesophageal varices



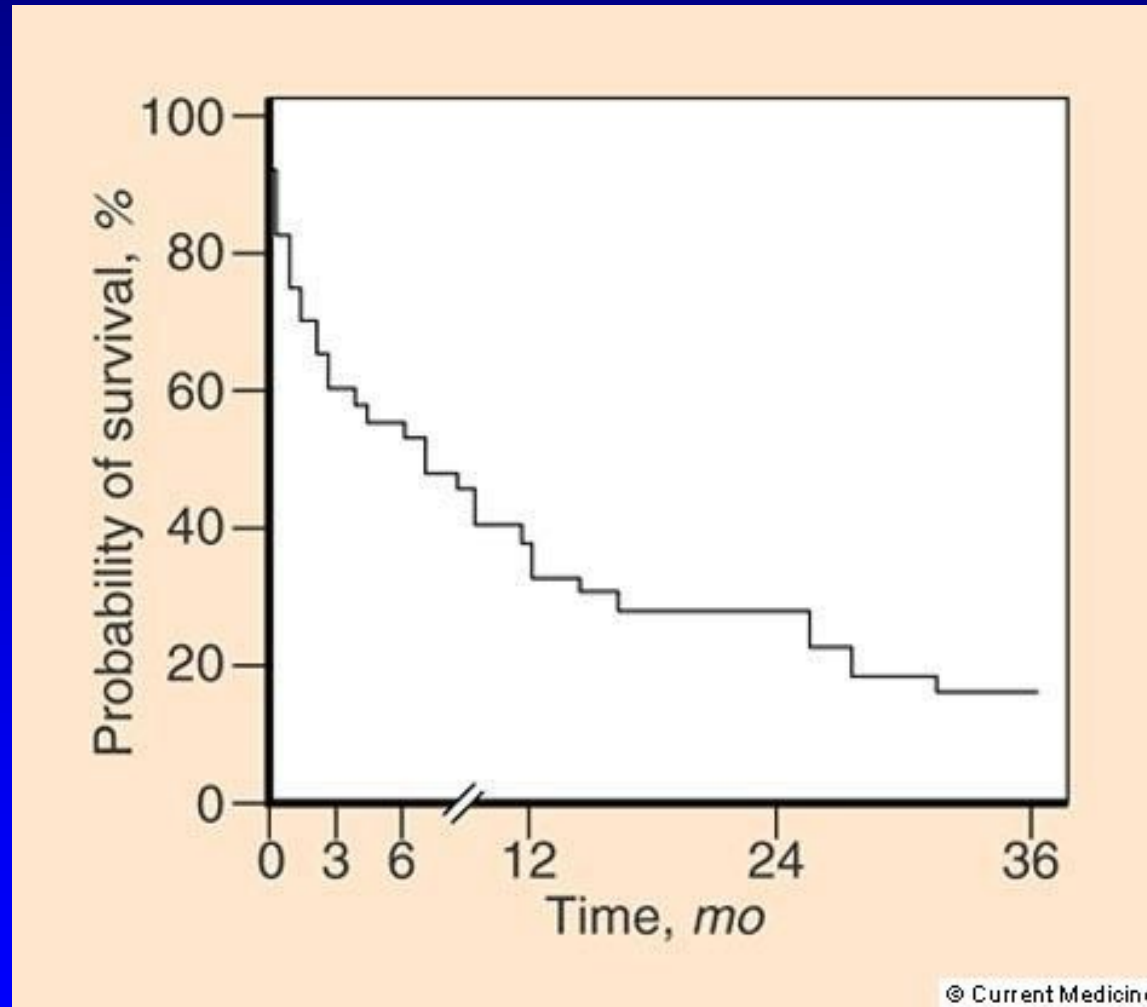
Variceal banding ligation



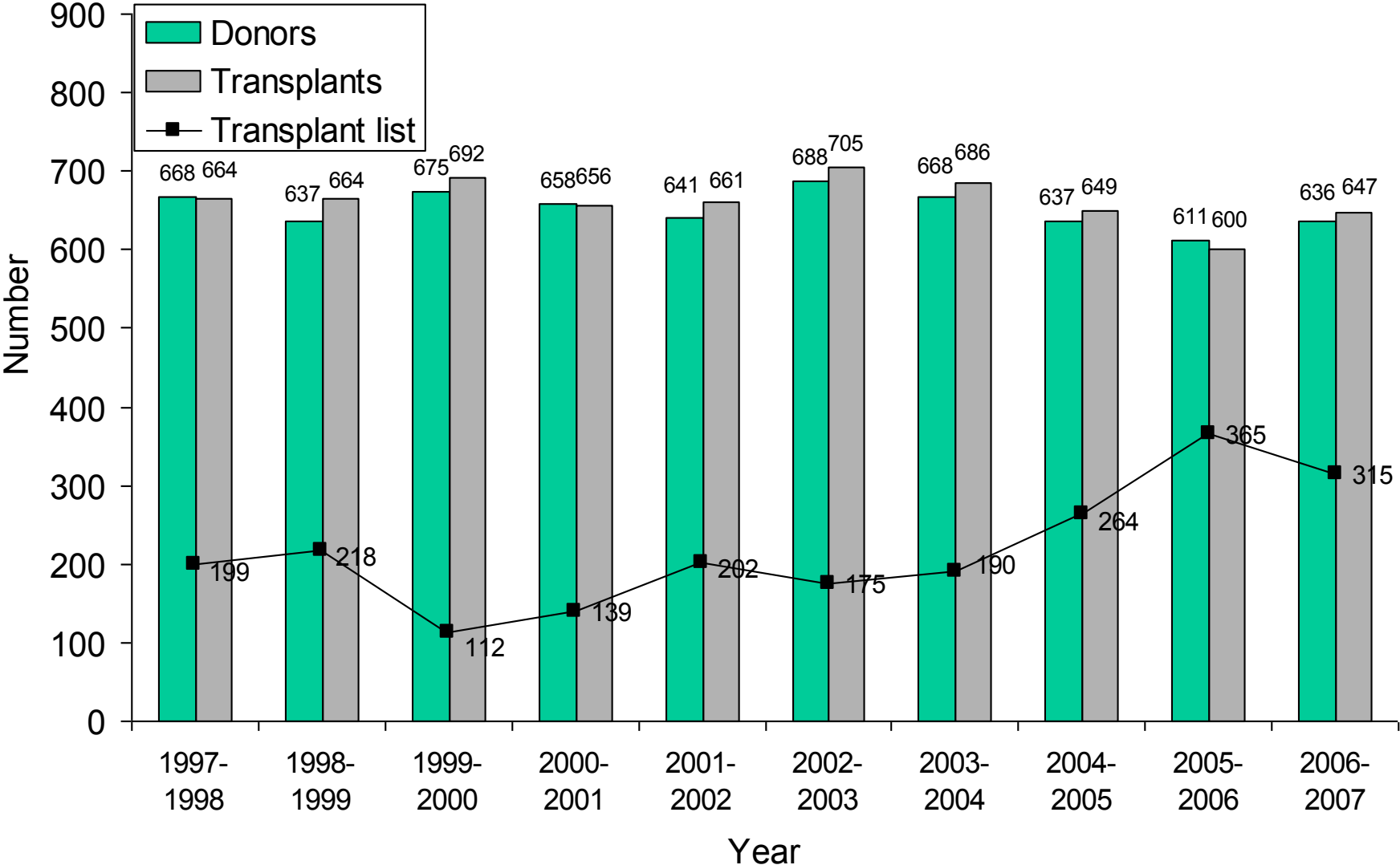
Ascites and spontaneous bacterial peritonitis (SBP)



Prognosis after first episode of SBP



Liver transplantation in the United Kingdom 1997-2007



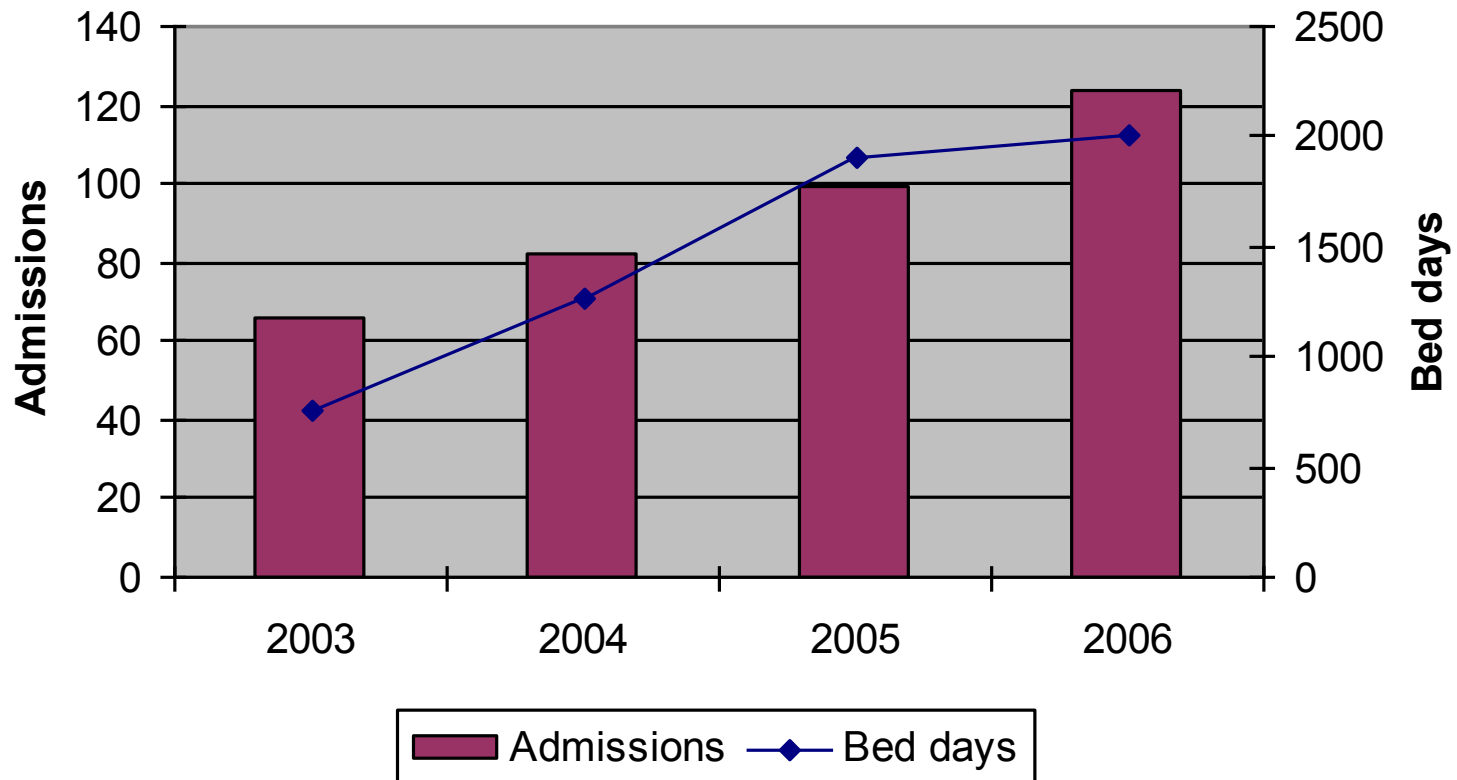
Scale of the problem

- Increasing burden of chronic liver disease
- Rising rates of liver cirrhosis (note lag time)
- Limited availability of donor organs for liver transplantation

**= Increasing numbers of patients with
endstage liver disease**

QAH Portsmouth: Admissions with complicated liver cirrhosis

Healthcare Resource Group GO7: Chronic liver disease with complication (bleeding, encephalopathy, ascites, kidney failure) for Portsmouth Hospitals NHS Trust



Prognosis in cirrhosis

Clinical Status	Definition	Cumulative Probability of Death Per 1 Year	Cumulative Probability of Exiting this Status Per 1 Year
Compensated cirrhosis [†]			
• Stage 1	No varices, no ascites	1%	11%
• Stage 2	Varices, no ascites	3.4%	10%
Decompensated cirrhosis [†]			
• Stage 3	Ascites ± varices	20%	7.6%
• Stage 4	Bleeding ± ascites	57%	—

*From D'Amico G, Garcia-Tsao G, Pagliaro L. Natural history and prognostic indicators of survival in cirrhosis: a systematic review of 118 studies. *J Hepatol* 2006;44:217–231; and de Franchis R. Evolving consensus in portal hypertension: report of the Baveno IV consensus workshop on methodology of diagnosis and therapy in portal hypertension. *J Hepatol* 2005;43:167–176.⁹⁵

[†]Decompensated cirrhosis is defined by the presence of ascites, variceal bleeding, and/or encephalopathy.

Challenges for managing liver disease in Portsmouth

- Very high local prevalence of alcohol misuse
- Highest regional rates of obesity and fatty liver disease
- Large pool of hepatitis C-infected individuals
- Historical lack of local specialist hepatology services

Models of service provision

Configuration from *National Plan For Liver Services*, Department of Health, BSG & BASL, pub. Oct 2009

- **DGH**
 - **Hepatology Centre**
 - **HPB unit**
 - **Liver Transplant Centre**
- Abn LFTs, cirrhosis, basic management of emergencies
 - Antiviral therapy, basic transplant workup, renal support, interventional radiology (TIPSS & HCC)
 - As above plus rare and complex liver diseases, liver resection, pancreatic surgery, population 2-4 million (5-8 centres)
 - Liver transplantation (7 centres)

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ALCOHOL-RELATED DISEASE

Meeting the challenge of improved quality of care and better use of resources

Lead Author

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Francis Keaney

Kevin Moore
Lynn Owens
Jonathan Rhodes
Don Shenker
Nick Sheron

A Joint Position Paper on behalf of the



British Society of Gastroenterology



Alcohol Health Alliance UK



British Association for Study of the Liver



Improving the management of alcohol-related diseases

Strengths of QAH services for liver disease

- Clear recognition of problems faced
- Active engagement with partner organisations
 - Local authority
 - Public health
 - Primary care
- Board-level support for new initiatives
- “Critical mass” of specialist expertise
- Opportunity to build high-quality, innovative, patient-centred services

Immediate priorities for improving alcohol services at QAH

- Senior champion for alcohol
- Senior representative at ASG
- Development of delivery plan
- Hospital alcohol service steering group – milestones for delivering action plan
- ED assault data collection

Improving delivery of IBA

- Staff training – eLearning, dedicated teaching sessions in ED
- Focus on ED, MAU, inpatients, sexual health services
- ED Scratch Card project
- VitalPac recording of alcohol data

Current and impending service developments at QAH (1)

- Alcohol liaison nursing service
- VitalPac alcohol misuse detection project
- Raising staff awareness of alcohol issues
- Repatriation of hepatitis C treatment services from Southampton to Portsmouth
- Recruitment of clinical nurse specialists in hepatology
- Joint outpatient clinics with diabetes centre for management of obesity & fatty liver

Current and impending service developments at QAH (2)

- Dedicated endoscopy list for managing oesophageal varices
- Combined Critical Care / Hepatology management of liver cirrhosis on ICU
- Interventional radiologist for management of liver cancer
- Satellite liver transplantation service
- Approved centre for specialist registrar training in liver disease
- Increase patient & public involvement

Summary

- Alcohol related diseases are major issue for health services in Portsmouth
- Key part of PHN Trust strategy
- Incorporate care of alcohol misuse into comprehensive liver disease service
- Clear, attainable, objective goals for improving patient outcomes

