# Why we need a national strategy for liver disease

For the last 10 years the British Association for the Study of the Liver and the British Society of Gastroenterology Liver Section have been campaigning for greater recognition of liver disease as an important priority for the NHS. Deaths from liver disease are escalating at a frightening rate (*Figure 1*) (British Association for the Study of the Liver, 2009). Based on current trends, the death rate from liver disease will exceed cardiac deaths by 2030. This needs to be reversed before we get to this ridiculous scenario – over 95% of all liver diseases are entirely preventable or treatable, and deaths from liver disease occur at an average age of 55 years rather than ~82 years for cardiac disease or stroke. To stop this we need to reduce the rising tide of alcoholic liver disease and fatty liver disease, and actively treat the increasing number of patients with chronic hepatitis B and C.

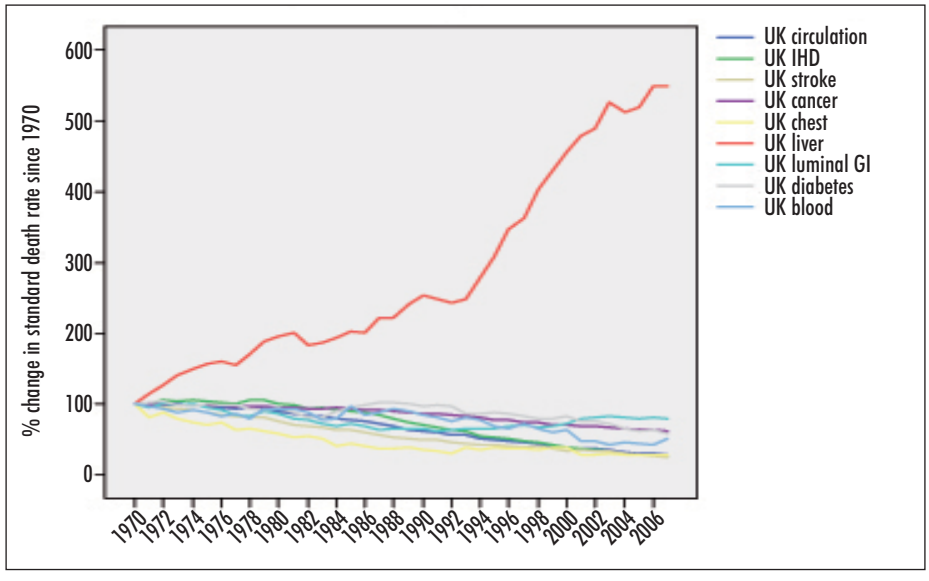
The Department of Health have just announced that they plan to have a National Strategy for Liver Disease, and Dr Martin Lombard of the Royal Liverpool University Hospital has been appointed as the new national Clinical Director for Liver Disease. Dr Lombard has all the credentials as an innovative clinical director locally, as well as being placed in a university liver unit that does not undertake liver transplantation, and can therefore be seen to be a fair player to all.

## What is the problem?

The UK faces an increasing burden of liver deaths with decreasing budgets, so the main task will be how to improve the quality of liver services while cutting costs. These two aims seem diametrically opposed, yet both are possible. One of the over-riding priorities to achieve this must be to ensure that there is a trained hepatologist in every district general hospital in the UK. Many patients are still being managed by consultants who are relatively inexperienced in treating liver disease.

We must be innovative, and collect data that will help us determine the best patient pathways and outcomes for the future. We need to establish local databases that capture information and outcomes in primary and secondary care and are built on a standard platform so that we can analyse data nationally as well as locally. At present the NHS does not know how many patients with hepatitis C have been treated, how much it has cost or the outcomes. Given the millions of pounds spent, this is outrageous. We will come back to this, and how it might work, later.

***Figure 1. Relative increase or decrease in deaths from liver disease (red line) to other diseases. From British Association for the Study of the Liver (2009). GI = gastrointestinal; IHD = ischaemic heart disease.***




## Reducing alcohol-related deaths

The almost sixfold increase in liver deaths since 1970 is largely the result of alcohol-related cirrhosis; if we are to reduce these deaths we must address the underlying cause. Since 1970 alcohol sales have moved away from specialist pubs and wine merchants. Now this dependence-inducing drug is just another supermarket commodity, to be piled high in as many places as possible and sold as cheaply as possible – sometimes at a loss to drive footfall. Coupled with this, the drinks industry lobby has driven down levels of taxation. Compared with 1979 a deliberate softening of taxation means that beer is 170%, wine 280% and spirits 350% more affordable.

One has to drink lot of alcohol to develop cirrhosis, around 50 000 units or an average of 100 units/week for 10 years or more. At the time of writing (November 2009) Tesco's cider sells at £1.21 for 8.4 units (15p/unit), meaning that a cirrhotic liver costs a mere £7800 – the price of a good second-hand car. If the government took the Chief Medical Officer's advice and brought in a minimum price of 50p/unit, this cost would rise to £25 000. Since 1980 the 'elasticity' of liver deaths in response to the affordability of alcohol is two-fold – a 25% increase in price would cause a 50% fall in liver deaths. According to Department of Health figures, hazardous and harmful drinkers consume more than three-quarters of all the alcohol sold; the massive supermarket profits from cheap booze have a terrible cost attached, and liver patients have been paying the price.

Despite the fact that a minimum price policy would not affect the price of a pint in a pub (because of the mark up), the power of the industry lobby means that it is still a long way off. In the meantime liver-related deaths and admissions will continue to rise. Many patients with alcoholic liver disease

are not severely alcohol dependent, they just drink too much, and are responsive to medical advice and interventions. A brief intervention might include a visit from an alcohol liaison nurse to a patient admitted with alcohol intoxication or an alcohol-related injury. At this point, such an intervention has a one in eight chance of altering the patient's life style, which makes this both effective and highly cost effective.

Once a patient presents to hospital with alcoholic cirrhosis, he or she has a 75% chance of being dead within 4 years if he or she continues to drink, and an 80% chance of being alive at 10 years if he or she stops drinking. By joining up the specialist expertise of addiction psychiatrists and hepatologists through specialist alcohol nurses it is possible to significantly improve outcomes and save the NHS money at the same time by reducing re-admission rates.

We need to alter the perception of alcohol – at present it is largely seen as fun and harmless. However, people are vain. The anti-smoking campaign succeeded partly because it emphasized the effects of smoking on how you look and how you smelt. Drinking to excess regularly makes you fat, gives you a red blotchy face, makes you age quickly, lose your memory, lose your driving licence, lose your job, lose your life through liver or cardiac disease – we could go on. The government could do so much more. We hope the National Strategy for Liver Disease will focus on these issues first and foremost.

## Fatty liver disease

At present fatty liver disease is not a major cause of death, but it will be unless we do something about it now. The most common reason for referral to hepatologists in the UK is for investigation of abnormal liver function tests. Some of these patients have alcoholic liver disease or chronic viral hepatitis, and some have other treatable causes of liver disease such as haemochromatosis, autoimmune hepatitis or rarely Wilson's disease, but most have fatty liver disease. Fatty liver disease can be divided into those with simple steatosis (i.e. fat in the liver but little inflammation) and those with steatohepatitis. Some of these cases are caused by alcohol, but most are caused by being overweight and taking no exercise.

How can we deal with this increase in referrals? All such patients should first be investigated in primary care, ideally by a GP experienced in such matters. We need a web-based decision support tool, similar to that developed by Fox et al (2009), which feeds and captures data into the local database held at strategic health authority level. Ideally all these databases would be identical to allow the creation of a national database.

GPs are used to calculating cardiovascular risk. These programmes would be similar except they would state what tests need to be done and what the most likely diagnosis is, with clear advice when to refer a patient. Importantly they would capture the data, link it to an NHS number and this would be linked to the Office for National Statistics, which provide data on deaths and mortality, so that we could establish in the long term the overall risk of death in patients with abnormal liver function tests or a particular diagnosis. It may be (we don't know) that we should follow the advice of some and undertake liver biopsies on all patients with abnormal liver function tests, but this could be done as a one-stop shop with hepatologists only seeing patients with significant fibrosis or inflammation rather than those with simple steatosis. Some may see such advances as dumbing down the importance of clinical medicine, but the reality is that current practice is not working.

These algorithmic approaches could link into a primary care centre that treats hepatitis C, as long as it is part of a managed clinical network that monitors all patients treated with hepatitis C so that both doctors and the Department of Health know the cost effectiveness of treatment.

## Hepatitis

Finally, we need to identify patients at risk of chronic hepatitis B or C. Immigrants and prisoners need screening, and we also need to screen all who have injected drugs in the past. The authors still see 'respectable' patients who injected in the 1970s and are HCV positive. We need to actively seek those at risk and treat the treatable to reduce the risk of cirrhosis and liver cancer.

## Conclusions

One of the most difficult aspects of liver disease to address will be the link with deprivation. Liver mortality rates are between three and five times higher in the most deprived compared with the least deprived sections of society. The underlying reasons for these linkages are unknown, differences are to some extent independent of alcohol intake, and diet and nutrition must be very strong candidates. More research is needed, and liver services need to reach into those communities most at risk and most resistant to behaviour change. It is only when lots of measures are undertaken that we will decrease the increasing burden of liver disease in the UK. **BJHM**

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British Association for the Study of the Liver (2009) *National Plan for Liver Services. A Time To Act: Improving Liver Health And Outcomes In Liver Disease.* www.basl.org.uk/media/uploads/National_Liver_Plan_2009.pdf (accessed 30 November 2009)
Fox J, Patkar V, Chronakis I, Begent R (2009) From practice guidelines to clinical decision support: closing the loop. *J R Soc Med* **102:** 464–73

## KEY POINTS

- The Department of Health has announced a national strategy for liver disease.
- To improve the quality of health care while cutting the rising mortality from liver disease the strategy should consider the following:
- A trained hepatologist should be available in every district general hospital.
- There should be national guidelines on the management of abnormal liver function tests, with a web-based decision support tool to enable the prospective collection of data, so that the risks and outcomes in patients with abnormal liver function can be assessed.
- There needs to be a much tougher alcohol strategy that develops alcohol liaison services (as already planned) and increases the price of alcohol.
- We need to actively seek and screen patients at risk for chronic hepatitis B and C so that they can be treated if indicated.