

Living Well

Liver Disease

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Introduction

Many types of liver disease are caused by a wide range of modifiable lifestyle factors. Other causes of liver disease can be hereditary either caused by a gradual build-up of iron in the body, usually around the liver (Haemochromatosis) or by Primary Biliary Cirrhosis, a rare, long-term type of liver disease that damages the bile ducts in the liver. However, 95% of cases of liver disease is caused by a wide range of modifiable factors.

Preventable causes of liver disease include: Chronic excessive consumption of alcohol, which can cause alcoholic related liver disease; being overweight or obese, which can cause non-alcoholic fatty liver disease; contraction and subsequent chronic infection from hepatitis B or C, which can cause viral hepatitis and inflammation of the liver.

Liver disease, in contrast to other chronic diseases such as stroke, heart disease and many cancers, is increasing in its incidence and prevalence. The associated morbidity and mortality of liver disease is creating significant demands not only on the health care system, but also society as a whole. Liver disease is the only major cause of premature mortality which is increasing in England while this has been decreasing in the EU15 (the 15 European Union member-states between 1st January 1995 and 30th April 2004)

What do we know?

Alcoholic-related Liver Disease (ARLD): ARLD refers to liver damage caused by excess alcohol intake. Drinking over the recommended limits of alcohol over many years increases the risk of developing ARLD Including a large amount of alcohol in a short amount of time. There are several degrees of severity and a range of associated symptoms including feeling sick, weight loss, loss of appetite, yellowing of the eyes and skin and swelling in the ankles and abdominals. There are three main stages of ARLD, although there's often an overlap between each stage, these are alcoholic hepatitis, alcoholic fatty liver disease and Cirrhosis.

Cirrhosis is where the liver is damaged by a scarring process and hepatocellular carcinoma, which is a primary cancer of liver cells. Cirrhosis of the liver can have serious health consequences including portal hypertension (increased pressure in a vein which supplies the liver with blood). This can lead to dangerous fluid build-up around the body. Additionally, portal hypertension can lead to life threatening gastrointestinal bleeding.

The national cost of alcohol consumption can be measured financially, but there is also a cost to society in terms of crime, lost productivity, morbidity and premature mortality. The financial cost of treating alcohol-related conditions is 3% of the NHS annual budget (*Government's Alcohol Strategy. Third Report of Session 2012-2013*). 70% of the cost to the NHS of alcohol-related services is spent on hospital treatment, largely for chronic conditions related to alcohol consumption. Restructuring this service to favour preventative measures represents an opportunity to achieve better outcomes for both individual patients and society. The estimated cost to society is £21 billion annually - £3.5 billion for NHS England; £11 billion for crime in England and £7.3 billion for lost productivity (*National Institute for Health & Care Excellence, 2012, Local Government Briefing 6*). Data provided by the Health and Social Care Information Centre (2014) describes the nation's current consumption of alcohol trends.

Obesity: A person who is obese or overweight is at high risk of non-alcoholic fatty liver disease (NAFLD). This is a disease caused by a build-up of fat in the liver and lead to serious liver damage, including cirrhosis if it becomes worse. If detected and managed at an early stage, it's possible to stop NAFLD getting worse and reduce the amount of fat in the liver. The symptoms include fatigue, abdominal dull aching pains unexplained weight loss and weakness. Adopting a healthy lifestyle and exercising regularly are the main ways of managing NAFLD.

The cost of being overweight and obese to society was estimated at £16billion in 2007 and this has been predicted to increase according to the department of health, possibly to £50 billion by 2050 if current trends continue (*National Institute for Health & Care Excellence, 2014*)

The proportion of Year 6 children classified as overweight or obese in West Berkshire was 29% in 2014/15, which was significantly better than the England average of 33%. The proportion of adults classified as overweight or obese in 2012-14 was 64%, which was similar to the England average of 65% (*Public Health Outcomes Framework, 2015*).

Hepatitis C: Hepatitis C is virus that can infect the liver and if untreated, can cause serious and potentially life threatening damage to the kidneys over many years. It is estimated that 215,000 people in the UK have hepatitis C and it can be contracted through blood-to-blood contact. Some ways the infection can be spread include sharing unsterilized needles, sharing razors or tooth brushes or through unprotected sex. In severe cases, life threatening problems such as liver failure or liver cancer can eventually develop.

Greater optimism exists with regards to chronic viral hepatitis, as both vaccination and drug therapy continue to advance. Whilst initially expensive, new hepatitis C drugs represent long term cost-effective prevention of chronic liver disease. However, a barrier to this potential success is the underutilisation of the hepatitis B vaccination and the forecast increase in immigration of infected individuals from high prevalence countries, both causing pools of infection within the population.

In 2012/13, 78% of people injecting drugs, who were in their latest treatment episode at specialist drug services, took up the hepatitis C test they were offered. In 2012, it was estimated that 38% of those who inject drugs have been infected with hepatitis

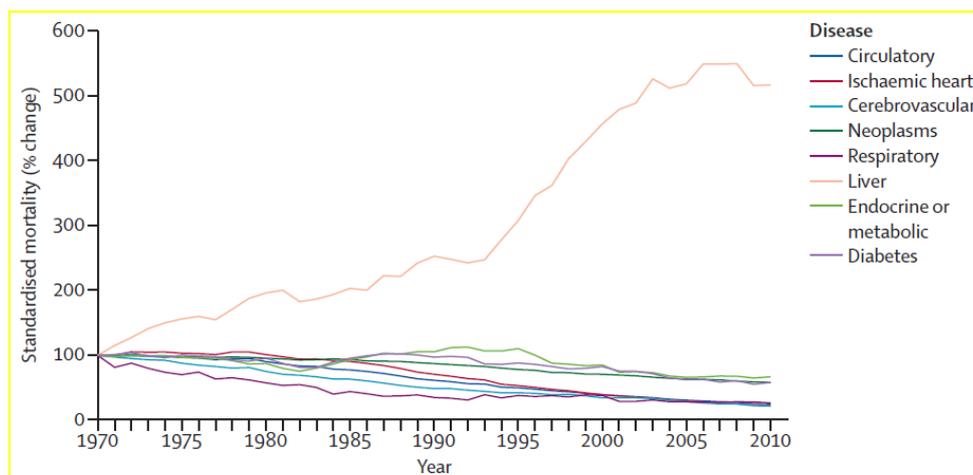
C. The estimated total infected with hepatitis C in West Berkshire is 300 ([Public Health England, 2015](#)). In 2012/13, 82% of babies born to mothers infected with hepatitis B received a complete course of hepatitis B vaccination. In the same year, the proportion of people in their latest treatment journey at specialist drug services, being offered and completing a course of hepatitis B vaccine was 44% ([Public Health England, 2015](#)).

The health of the UK has been improving steadily for most diseases over recent decades. This is partly due to investment in resources to tackle diseases such as cardiac disease. Liver disease has not followed this trend and has in fact significantly increased in its prevalence. [The Lancet Commission \(2014\)](#) identifies that standard mortality rates have increased 400% from 1970 to 2010, and most of these patients die in working age (Figure 1). [The Public Health England \(2014\)](#) identifies liver disease as the third largest cause of premature mortality after ischaemic heart disease and self harm.

Alcohol specific hospital admissions in West Berkshire: There were 305 alcohol specific hospital admissions in West Berkshire in 2013/14 (200 male and 105 female). The rate of alcohol specific hospital admissions in West Berkshire was significantly lower than the England average. Between 2010 and 2012, an average of 5 men and 1 woman aged under 75 died each year in West Berkshire from alcoholic liver disease ([Public Health England, 2015](#)).

The hospital admission rates due to liver disease in men is 310 per 100,000, significantly better than the South East average of 374 per 100,000 and the England average of 502 per 100,000. For women, the West Berkshire average is also significantly better (126 per 100,000) than the South East (192 per 100,000) and England average (235 per 100,000). In 2013/14 there were 111 hospital admissions due to liver disease, a rate of 72.7 per 100,000 compared to the rate for England of 115.8 per 100,000.

Figure 1: Demonstrating percentage change in standardised mortality rates where 1970 is regarded as 100%

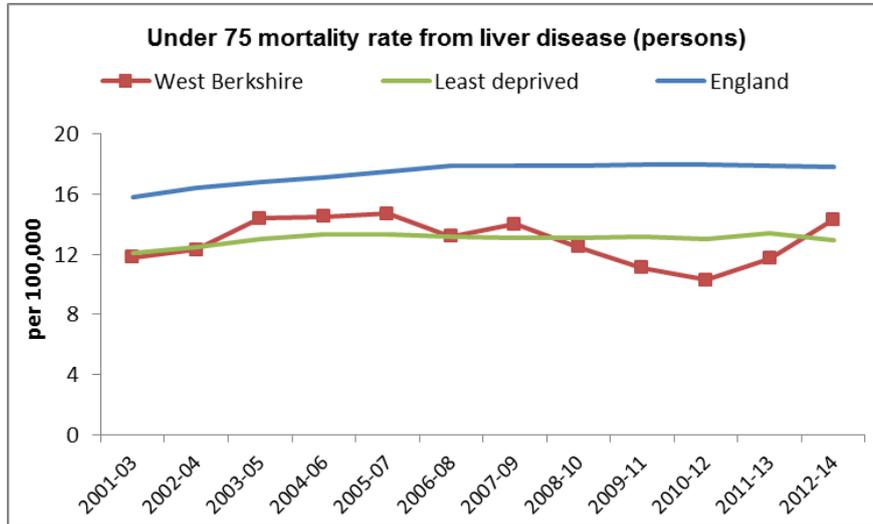


Source: [The Lancet Commission \(2014\)](#)

Figure 1 demonstrates the percentage change in standardised mortality rates since 1970 in the United Kingdom (UK). The standardised mortality rates of the majority of diseases mentioned above are decreasing on a 5 year basis whereas liver disease

continues to rise at a significant rate, most prominently between 1994–2003. In England, liver disease causes approximately 2% of all deaths and the total number is rising, from 15.8 per 100,000 in 2001-03 to 17.8 per 100,000 in 2012-14.

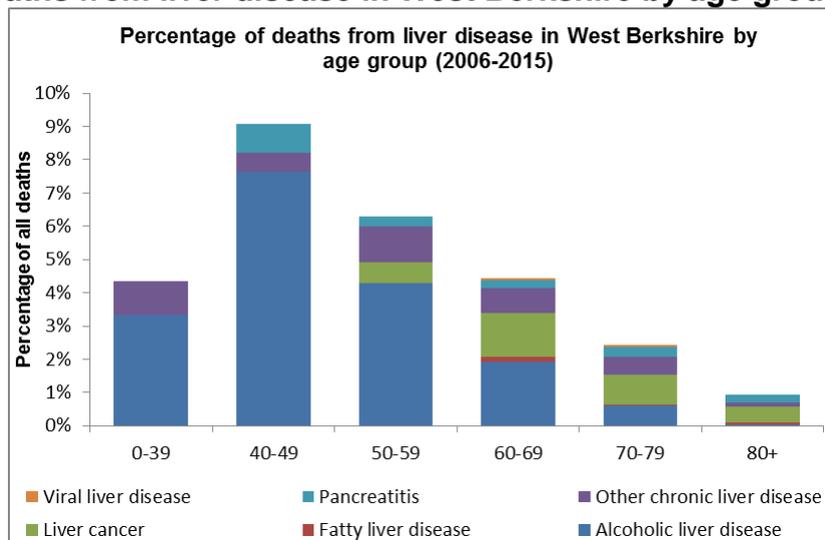
Figure 2: Under 75 mortality rate for liver disease (persons) in West Berkshire between 2001-03 – 2012-14.



Source: Public Health Outcomes Framework (2015)

Figure 2 depicts the premature mortality rates caused by liver disease across West Berkshire, similar comparator groups of local authorities from the same deprivation decile and the England average. Between 2001-03 and 2012-14, the average number of people who died each year with an underlying cause of liver disease has increased from 40 per 100,000 to 59 per 100,000. Compared to the England Average, West Berkshire has a similar rate to both the South East (14.8 per 100,000) and England averages (17.8 per 100,000).

Figure 3: Deaths from liver disease in West Berkshire by age group (2006-2015)



Source: Primary Care Mortality Database (2015)

Figure 3 details the percentage of deaths from liver disease in West Berkshire by age group between 2006 and 2015. Alcoholic liver disease was the greatest cause

of death in those dying from liver disease aged under 69 years. Other chronic liver disease contributed toward liver disease deaths in West Berkshire under 80 years.

Under 75 mortality rates of liver disease for men were higher in West Berkshire at 15.5 per 100,000 population, compared to England average (13.3 per 100,000 population). The under 75 mortality rates of liver disease for women in West Berkshire are also higher (13.3 per 100,000) when compared to the national average (12.4 per 100,000 population).

What is the data telling us?

Mortality from liver disease is increasing in the UK, whilst mortality from other major diseases is decreasing. Disease of the liver is largely caused by preventable lifestyle behaviours, the three main causes being alcoholic liver disease, non-alcoholic fatty liver disease and viral hepatitis. Whilst these three factors are all significant contributors to liver disease, excessive alcohol consumption represents the most serious burden. Alcohol consumption continues to rise rapidly and following this trend closely is a rise in alcohol related A&E attendances, alcohol related hospital admissions to hospital, alcohol related mortality and a rise in alcohol related crime and loss of productivity.

Attendances at A&E and rates of premature death are increasing secondary to these causes and this represents an opportunity for preventative measures to be implemented to stem the rise. Although there is no national framework to combat liver disease, Public Health England recognises it as a public health priority and recommendations are being made by a variety of interested organisations aimed at tackling liver disease. A preventative approach will alleviate an increasing pressure on primary and secondary care providers.

Liver disease disproportionately affects the younger age groups - 90% of people who die from liver disease are under 70 years old and 10% of deaths of people in their 40's are from liver disease ([Public Health England, 2014](#)). Deaths from liver disease in males exceed those in females for all age groups, apart from those aged 80 and over. West Berkshire's under 75 mortality rate from liver disease for men is higher than the female rate, however it was significantly better than the England rate in 2012-14.

Alcoholic liver disease accounts for 37% of liver disease deaths and there are three times as many deaths from alcoholic liver disease in the most deprived areas of England compared to the least deprived. Mortality rates from liver disease for people aged 75 and under also vary significantly by geographical location, being generally higher in the north than the south of England. Part of this variation may be explained by underlying deprivation-related variation in liver disease incidence and mortality. West Berkshire is classified within the least deprived decile in the country.

Recommendations for consideration

- Additional intelligence is required to understand the impact of liver disease in primary and secondary care.
- Vaccination against Hepatitis in high risk groups and early effective treatment of hepatitis should be prioritised.
- Primary care clinicians and tier 2 and 3 lifestyle services should be continually updated on the risks of liver disease and the latest evidence to support prevention and early treatment.
- Continually work toward reducing the stigma associated with liver disease whereby circulating a greater awareness of its risk.

Other services and partner organisations

[Alcohol and drug support services in West Berkshire](#)

[The Edge: Young people's drug and alcohol service for West Berkshire](#)

[Swanswell: Drug and alcohol support service for adults in West Berkshire](#)

[NHS Choices: Drugs](#)

[FRANK: Friendly, confidential drugs advice service](#)

National and local strategies

There is no national strategy on combating the rising level of liver disease. Specific advice can be found in Public Health England's (2015) [Liver Disease in the South West: a health needs assessment](#), and while this is based on South West England the recommendations can be generalised nationally. These include prevention strategies for the three main preventable causes of liver disease, which include identification and brief advice for alcohol misuse, needle and syringe programmes, immunisation for hepatitis B prevention and healthy lifestyles to reduce obesity and its impact on health. Additional advice includes education for health care professionals, specifically improving expertise in primary care, and public health campaigns. Finally this document recommends a minimum unit price for alcohol, which is also, included in the *All-Party Parliamentary on Hepatology Group (APPHG) (2014) [Inquiry into Improving Outcomes in Liver Disease](#).*

The APPHG Inquiry outlines 20 recommendations which focus on prevention of liver disease and the provision of national guidance for a coordinated approach to combating liver disease. As well as the recommendation that the government implements a minimum unit price of alcohol to 50p, it also endorses universal hepatitis B vaccination, elimination of hepatitis C in 15 years and the promotion of obesity reduction programs in the context of liver disease. It also recommends that Liver Function Tests should become part of the health check for over 40's. The [British Society of Gastroenterology](#)'s alcohol related disease paper (2010) outlines key recommendations regarding alcohol related disease. Chief among these

are for multidisciplinary 'alcohol care team' led by a consultant to be accessible to a typical district general hospital. Additional recommendations include the instigation of coordinated policies on detection and management of alcohol-use disorders in A&E with access to brief interventions and appropriate services within 24 hours of diagnosis, 7 day alcohol specialist nurses and link workers, addiction psychiatrists with specific responsibility for screening for depression, the establishment of an outreach alcohol service, integrated alcohol treatment pathways and integrated modular training in alcohol and addiction for relevant members of staff. Further research targeting alcohol-use disorders is also called for.

[The Lancet Commission](#) provide 10 recommendations, again these largely focus on the detection, screening and prevention of liver disease with the provision of a 7 day specialist alcohol unit in district general hospitals. Their other recommendations mirror those already mentioned above.

National Institute for Health and Care Institute (NICE) guidance includes:

- [PH43: Hepatitis B and C testing](#) (2012) - aims to ensure more people at increased risk of hepatitis B and C infection are tested.
- [CG189: Obesity identification, assessment and management](#) (2014) - evidence-based advice on the care and treatment of obesity
- [QS83: Alcohol – preventing harmful use in the community](#) (2015)

Other chapters you might be interested in

Childhood Obesity

Adult Obesity

Alcohol

Drug Misuse

Substance Misuse

Communicable Disease

If you have any questions about this chapter, please contact Public Health and Wellbeing Team on publichealthandwellbeing@westberks.gov.uk or 01635 503437