

# Hepatocellular carcinoma and other liver disease in the North West of England

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## BACKGROUND

Hepatocellular carcinoma (HCC), the most common type of primary liver cancer, is causally related to hepatitis and alcohol misuse. Liver disease, including HCC, causes approximately 2% of all deaths in England<sup>1</sup>. While other major causes of death are falling, deaths from liver disease are increasing and younger age groups are disproportionately affected. Mortality from liver disease is higher in the North West than the rest of the country<sup>1</sup>. Our aim was to pool public health intelligence resources in order to add depth to this picture.

## METHODS

A number of routine datasets spanning 2005 to 2010 were exploited. These included mortality data, HES, the National Cancer Data Repository, alcohol and drug treatment data, obesity profiles, needle and syringe programme data, Health Survey for England and prevalence survey data and laboratory surveillance and transplant data. From these data incidence, mortality and survival rates were derived to describe the burden of HCC and other liver disease by age, sex, deprivation and geography.

## RESULTS

- HCC accounts for less than 1% of all reported cancers in the NW
- Mortality rates in 2010 from all liver disease was almost double those in 1995
- Mortality from liver disease was higher in the NW than England and was increasing faster than the rest of the country
- Incidence and mortality rates for HCC were higher among males than females, a pattern that was seen across the spectrum of liver disease (figure 1 and 2)
- Alcohol-related liver disease accounted for a large proportion of deaths due to liver disease in the NW; 47% of deaths in males and 43% in females (figure 3)
- Prevalence of hepatitis C in injecting drug users was also higher in the NW than England

- One- and five-year survival of HCC (2001-05) was significantly lower in the NW than England (figure 4)
- For all liver disease, variance in local authority mortality may be attributed to levels of deprivation; mortality rates in Blackpool were over five times greater than those in Eden and almost nine times higher for alcohol-related liver disease (figure 5)
- Hospital admissions for all liver disease in 2010 were significantly higher in the NW than England, with the highest rate in the NW seen in Manchester
- Alcohol-related cirrhosis was the leading cause of registrations for liver transplants in the NW, with more deaths in the most deprived areas

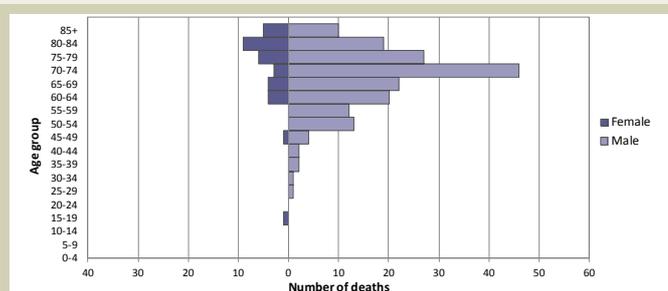


Figure 1. Hepatocellular carcinoma mortality (underlying cause) by age and gender, North West, 2010

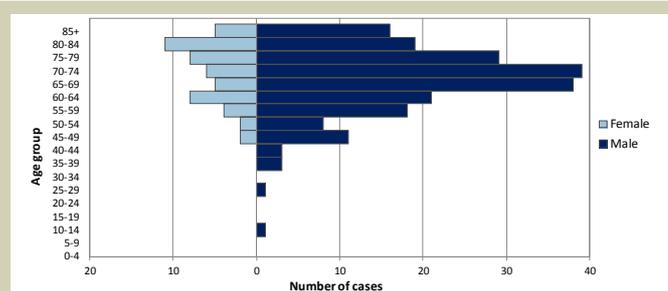


Figure 2. Incidence of hepatocellular carcinoma by age and gender, North West, 2010

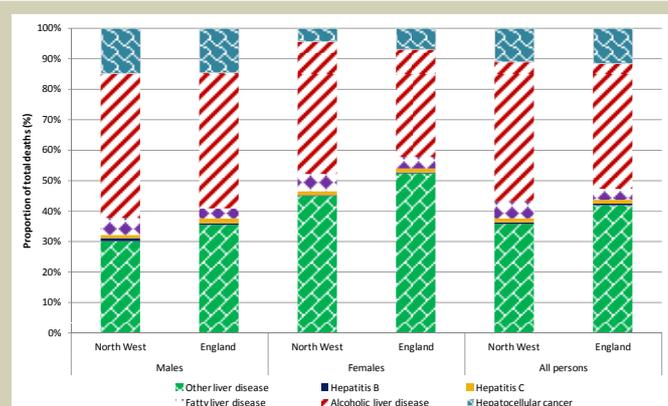


Figure 3. Liver disease mortality (underlying cause) by broad category of liver disease and gender, North West and England, 2010

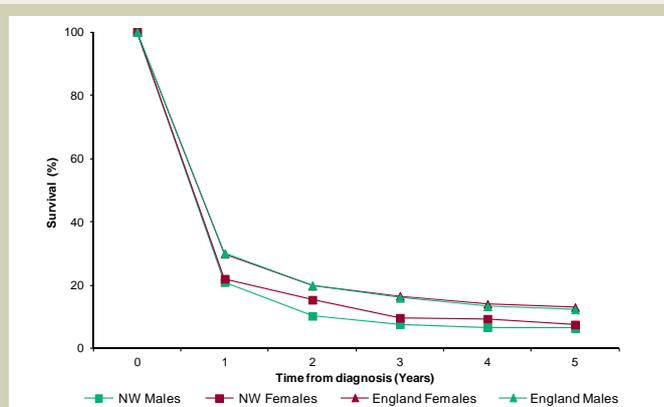


Figure 4. One- to five-year survival for individuals diagnosed with hepatocellular cancer (2001 to 2005) by gender, North West and England

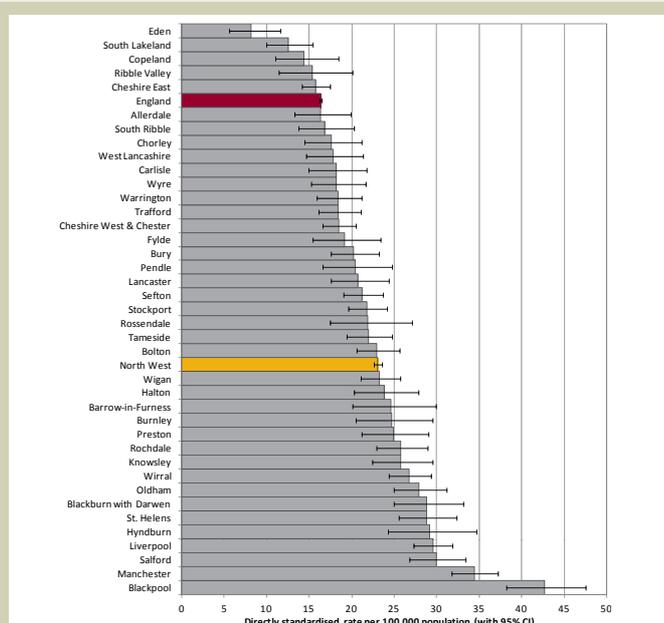


Figure 5. Mortality rates for all liver disease (underlying cause) by local authority, North West, 2006 to 2010

## CONCLUSIONS

Our findings show the high and increasing burden of liver disease, including HCC, in the North West, particularly among middle aged men and more deprived communities. The results will serve as a baseline to measure progress in reducing the prevalence and consequences of liver disease.

This project presented the opportunity for different groups within public health intelligence to work together; the collaborative success of which represents a positive signpost for Public Health England.

## RECOMMENDATIONS

- Tackling liver disease should be a priority for North West commissioners of prevention and treatment services
- Commissioners and providers should work together to devise a strategy for the early diagnosis of HCC
- An end of life strategy for liver disease patients in the North West needs to be developed
- Policies that focus on reducing alcohol consumption should remain a priority
- Further investigation into the causes of differences in the burden of liver disease between local authorities is needed

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Health Protection Agency: Debbie Anderson

## REFERENCES

1. National end of life care intelligence network (2012). Deaths from liver disease. Implications for end of life care in England. Bristol: South West Public Health Observatory.