

2016

# The State of Liver Health in Derbyshire



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### VERSION CONTROL

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## 1 INTRODUCTION

Deaths from liver disease are increasing in England. This is in contrast to most EU countries where liver disease death rates are falling. Between 2001 and 2012 the number of people who died with an underlying cause of liver disease in England rose from 7,841 to 10,948. This represents a 40% increase in liver deaths during this period and is in contrast to other major causes of disease which have been declining. Liver disease is largely preventable. Whilst approximately 5% of liver disease is attributable to autoimmune disorders (diseases characterised by abnormal functioning of the immune system), most liver disease is due to three main risk factors: alcohol, obesity and viral hepatitis

### 1.1 Alcoholic liver disease

Alcohol is the most common cause of liver disease in England. Alcoholic liver disease accounts for over a third of liver disease deaths and around three quarters of chronic liver disease deaths. The more someone drinks above the lower-risk guideline, the higher their risk of developing liver disease. The UK is one of the few European countries where alcohol consumption has risen in the last 50 years

### 1.2 Non-alcoholic fatty liver disease

Obesity is an important risk factor for liver disease because of its link to non-alcoholic fatty liver disease (NAFLD), which is the term used to describe accumulation of fat within the liver that is not caused by alcohol. It is usually seen in people who are overweight or obese. Although the great majority people with NAFLD never experience any symptoms from the condition, a minority may progress to a more serious form of the disease known as non-alcoholic steatohepatitis, which may ultimately lead to fibrosis and, in a small number of cases, cirrhosis. The rate of fatty liver disease is projected to increase as the rates of obesity increase

### 1.3 Hepatitis B

Hepatitis B is a virus which is transmitted through contact with infected blood or other body fluids. Acute infection can lead to chronic disease and during the acute phase of infection the majority of people including children are asymptomatic; only a third of adults develop symptoms which may include cold-like symptoms, nausea, fever and jaundice. Most acute infections are acquired through adult risk behaviours such as injecting drug use and sexual contact. The risk of developing chronic hepatitis B infection depends on the age at which infection is acquired. Chronic infection occurs in up to 90% of children who acquire the infection under the age of 5 years and up to 10% of people infected as adults. Those who are chronically infected are at risk of developing chronic liver disease and liver cancer. In the UK, annually the majority (95%) of newly identified chronic hepatitis B infections are acquired overseas at birth or at a young age. The prevalence of chronic hepatitis B infection in the UK is estimated to be 0.3% (approximately 180,000 people). Hepatitis B vaccines are available and highly effective and immunisation is recommended for high risk groups.

### 1.4 Hepatitis C

Hepatitis C virus is mainly transmitted through contact with infected blood. Injecting drug use is the most important risk factor for infection within the UK. People born or brought up in a country with high prevalence of chronic hepatitis C are also at risk (especially those in Africa and Asia, including Egypt, China and Pakistan), as are those who received blood transfusions in the UK prior to the introduction of HCV testing in 1991. The prevalence of chronic Hepatitis C infection in England is estimated to be 0.4% of adults (approximately 160,000 people).

Hepatitis C is often asymptomatic, and symptoms may not appear until the liver is severely damaged. Around 20-30% of infected people clear their infection naturally within the first six months of infection. For the remainder, hepatitis C is a chronic infection which can lead to liver disease. Data from the Unlinked Anonymous Monitoring survey of people who inject psychoactive drugs suggest that levels of infection in this group are high at around 50% in England with around 1 in 7 sharing needles/syringes. Around one in 20 of those who inject image and performance enhancing drugs (such as anabolic steroids and melanotan) have also been infected with hepatitis C.

## 2 INDICATORS OF THE STATE OF LIVER DISEASE IN DERBYSHIRE

### 2.1 All Liver Disease

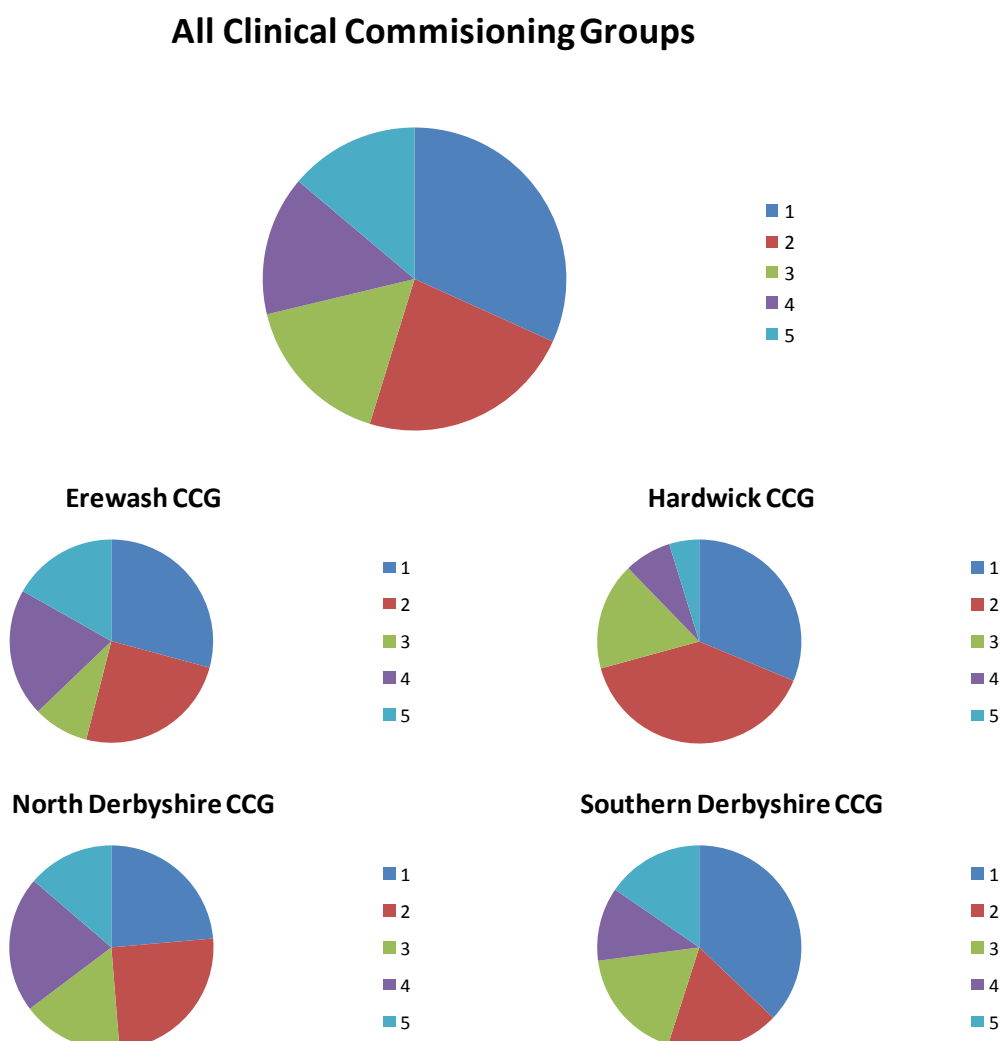
#### 2.1.1 Hospital admissions

Men are more likely to be admitted to hospital with liver disease than women in an approximately 60:40 ratio. The rate of hospital admissions for men in Derbyshire is significantly lower than for both England and East Midlands. For Derby it is significantly higher than for England and East Midlands. The rate for women in Derbyshire is also lower, but not significantly so, than for England and East Midlands. For Derby it is higher than for both England and East Midlands, but not significantly so. The Derbyshire **all-person rate is significantly lower than for both England and East Midlands**. The Derby rate is significantly higher than both. For all rates Derbyshire is middling compared to its peer group (CIPFA Nearest Neighbours – see Appendix B), Derby is at the upper end of its group.

#### 2.1.2 Hospital admissions: deprivation

All the data in this and the following section refer to non-elective hospital admissions for the registered populations of Erewash, Hardwick, North and Southern Derbyshire CCGs only. In the 35 months between April 2013 and February 2015 there were 1419 admissions to hospital (First Finished Consultant Episodes) with a primary diagnosis of liver disease. 59% were of men and 41% of women. Almost a third lived in the most deprived quintile of lower super output areas according to the Index of Multiple Deprivation 2010; over half lived in the two most deprived quintiles. By CCG, there were 130 admissions in Erewash, 155 in Hardwick, 414 in North and 720 in Southern. Overall **higher rates of hospital admissions are seen in more deprived areas**.

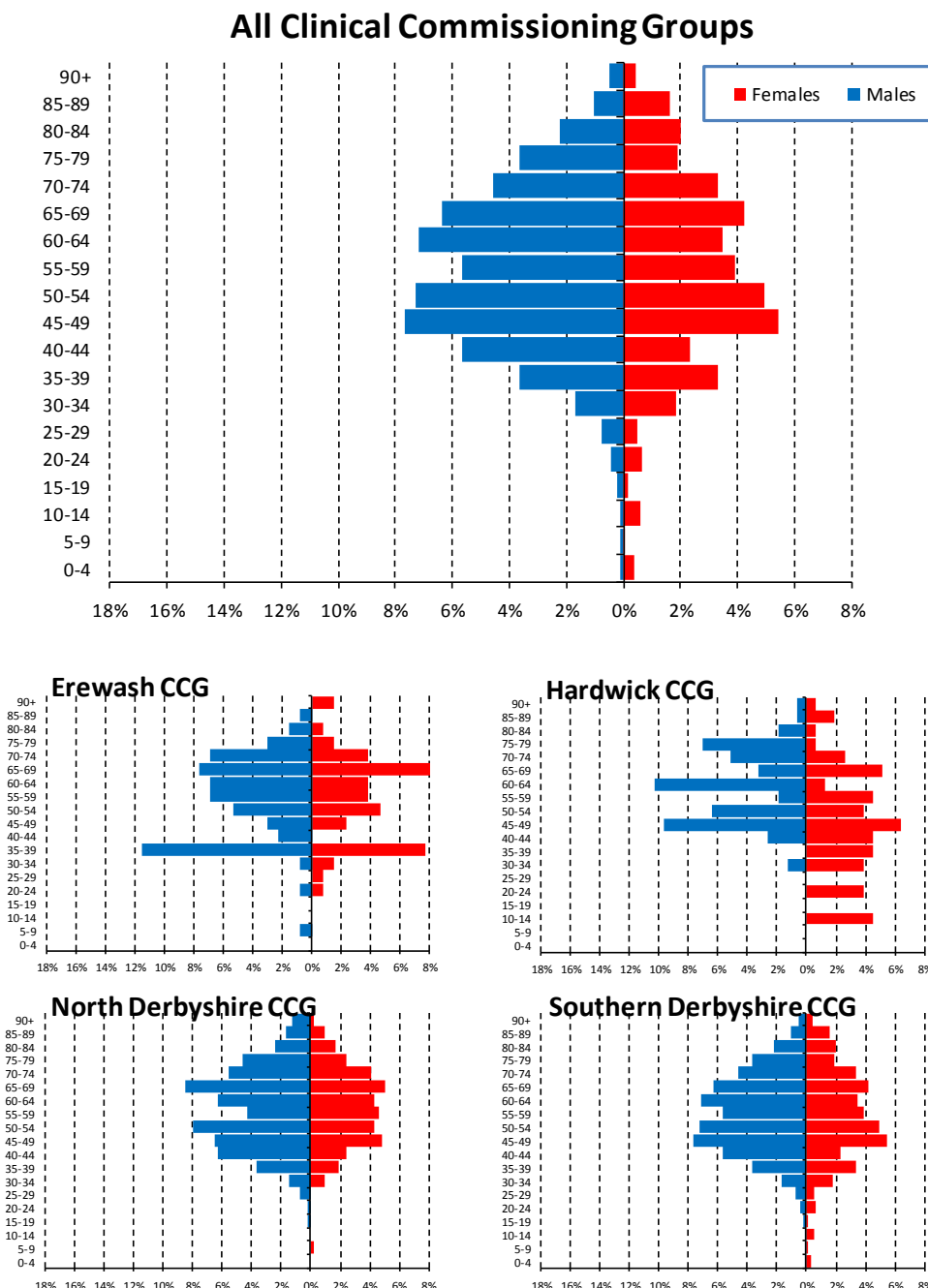
Figure 1 Non-elective admissions for liver diseases by deprivation



### 2.1.3 Hospital admissions: age and gender

Hospital admissions for liver disease peak between age 45 and 70. The distribution of female admissions mirrors that of males, but, as seen earlier, is a smaller proportion of the whole.

Figure 2 Non-elective admissions for liver disease by age and sex



### 2.1.4 Ward level analysis of hospital admissions

The wards in Derbyshire with the highest number of admissions (Hasland, Lowgates and Woodthorpe, Swadlincote, Loundsley Green and Bakewell) all average fewer than 7 per year and account for less than 10% of the total. One half of all wards average fewer than 1 admission per year.

### 2.1.5 Premature mortality

In 2014 there were 230 deaths with an underlying cause of liver disease in Derbyshire and 73 in Derby. **In Derbyshire two thirds (66%) of these deaths were premature ie individuals aged under 75 years;** in Derby the proportion of premature deaths was higher at 77%. The mortality rate in men aged under 75 is lower in Derbyshire than for East Midlands and significantly lower than for England. Although the year on year change is not statistically significant the recent trend is towards higher mortality. The mortality rate in women aged under 75 is significantly lower than for both England and East Midlands. The recent trend is towards higher mortality, but the change is not statistically significant. **The all person premature mortality rate is lower than for both England and East Midlands, but the recent trend, although not significant, is upward.** All the rates for Derbyshire are middling compared to the peer group.

In Derby the female rate is higher than for England and East Midlands but not significantly so; the male and all person rates are significantly higher. The trend is towards increasing mortality, but without significant year on year change. The rates for Derby are at the upper end of the peer group for males, but middling for females and all persons.

At district level only Amber Valley had enough female deaths in the last 3 years for a robust rate to be calculated; this was lower though not significantly than the England and East Midlands rates. With respect to male premature deaths, Amber Valley had a lower rate than England and East Midlands, with an upward trend; Chesterfield had a higher rate with an upward trend; Erewash had a lower rate; North East had a lower rate; South had a lower rate. A robust rate could not be calculated for the other districts.

At CCG level in 2014 deaths, and premature deaths, were as follows: 26 deaths in Erewash CCG, 21 of which were premature; 34 deaths in Hardwick CCG, of which 21 were premature; 83 deaths in North Derbyshire CCG, of which 54 were premature; 144 deaths in Southern Derbyshire CCG, of which 98 were premature. The male under 75 mortality rate is higher than for England in Erewash, North and South CCGs, but not significantly so. It was also higher than the Derbyshire & Nottinghamshire Area in Southern Derbyshire CCG. The female rate is higher than for England and Derbyshire & Nottinghamshire in Erewash and South. The all person rate is also higher than for England and Derbyshire & Nottinghamshire in Erewash and South. Trends appear to upwards for all but Hardwick CCG.

### 2.1.6 Preventable premature mortality

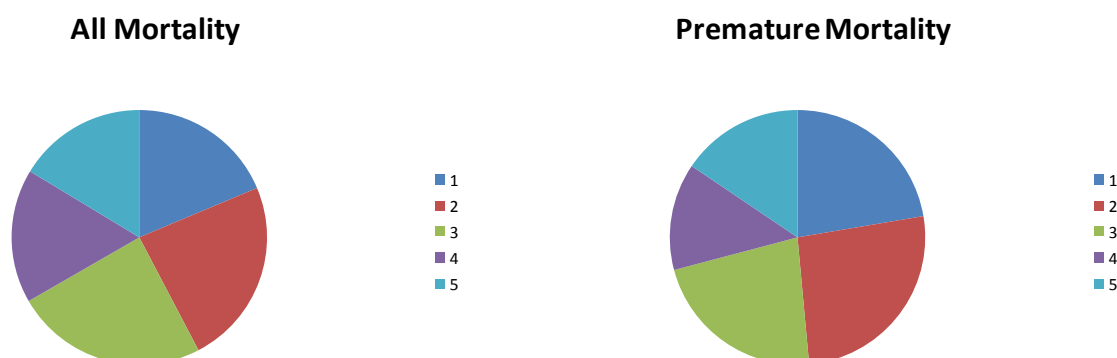
**The proportion of premature mortality which is regarded as preventable is 88% in Derbyshire and 89% in Derby.** This compares to 88% in England and 89% in East Midlands. Whilst the proportions are similar for males and females in Derby and in England, in Derbyshire and East Midlands those **for males are considerably higher, at 92% and 91%**, than those for females, at 81% and 86%. The male rate of under 75 mortality considered preventable is lower for Derbyshire than for England and East Midlands, but not significantly so. There is an upward trend but year on year changes are not significant. The rate for Derby is significantly higher than for both England and East Midlands. Again the trend is upward but year on year changes are not significant. The rate for females is lower for Derbyshire than for England and East Midlands, but not significantly so. There is an upward trend but year on year changes are not significant. The rate for Derby is higher, but not significantly so, than for both England and East Midlands. Again the trend is upward but year on year changes are not significant. The all person rate is again lower than for England and East Midlands, but not significantly so, whilst the rate for Derby is significantly higher. The rates for Derbyshire are middling within the peer group. The rates for Derby are at the upper end of its peer group.

**None of the districts in Derbyshire have rates which are significantly different from England or East Midlands.**



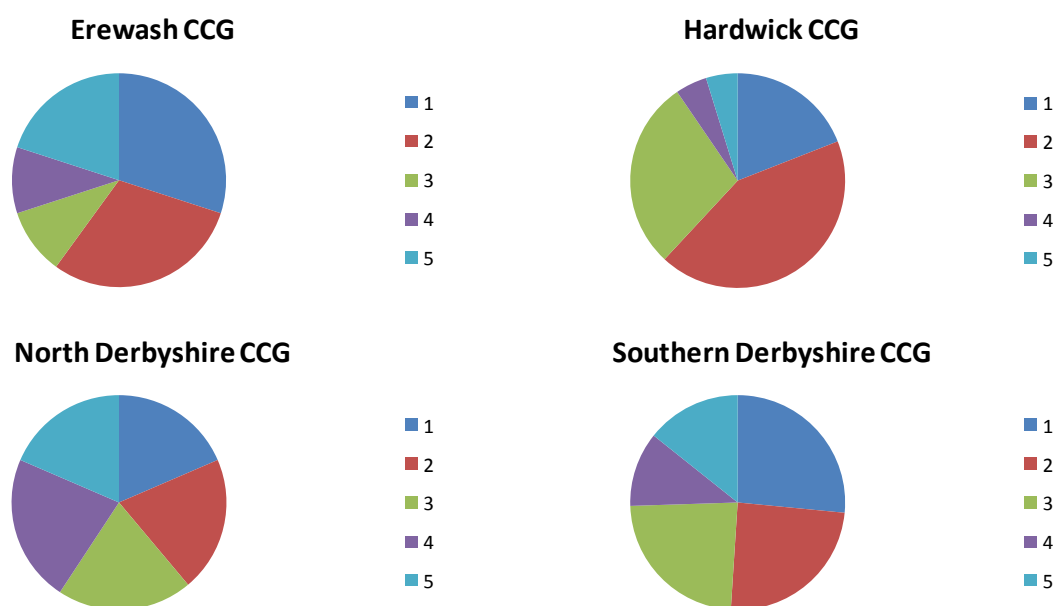
## 2.1.6 Mortality: deprivation

Figure 3 Mortality from liver disease by Deprivation



Across the county and city mortality from liver disease is fairly evenly spread across the deprivation quintile, although it is somewhat higher in the more deprived quintiles. **Premature mortality is more common in the more deprived quintiles, almost half of all deaths occurring in the two most deprived quintiles.**

Figure 4 Mortality from liver disease by Deprivation by CCG

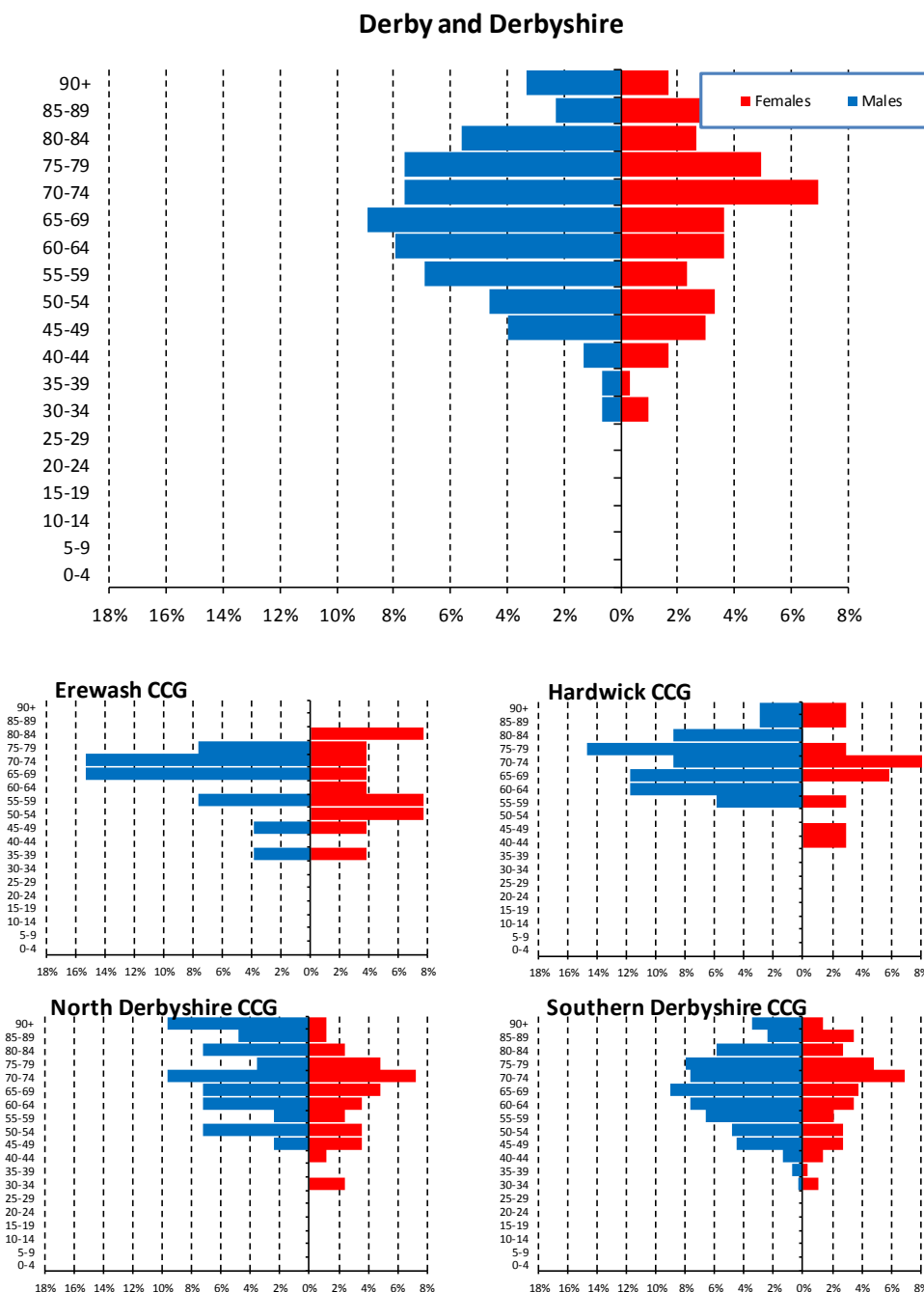


The distribution of all age and premature mortality is very similar for each of the CCGs. In Erewash about a third each were from the two most deprived quintiles. In Hardwick around two thirds in total came from the two most deprived quintiles. In North mortality was spread evenly across all quintiles. In South around a quarter each came from the three most deprived quintiles.

### 2.1.7 Mortality: age and gender

Mortality from liver disease peaks between the ages of 50 and 80 in men and between 70 and 80 in women, who die in considerably fewer numbers. There were 303 deaths in Derby and Derbyshire in 2014, 186 were of men and 117 of women.

Figure 5 Mortality from liver disease by age and gender



### 2.1.8 Mortality: ward-level analysis

Although the number of liver disease deaths was too small to allow for detailed analysis the following was apparent. Two wards (of 17), Arboretum and Mackworth, accounted for one third of all mortality in Derby City in 2014. Together with Stanton & Newhall in South Derbyshire, these accounted for over ten percent of mortality in Derby and Derbyshire.

## 2.2 Chronic and alcoholic liver disease

### 2.2.1 Admission episodes for alcoholic liver disease

The male rate for Derbyshire is significantly lower than for England and lower than for East Midlands. There is no clear trend. The female rate is lower than for East Midlands and significantly lower than for England. There is a slight upward trend, but with no significant year on year changes. **The all person rate is higher than for East Midlands, but significantly lower than for England. There is no clear trend. All three rates are towards the upper end of the peer group range.** The rates for Derby are all higher than for England, but not significantly so. The male and all person rates are significantly higher than for East Midlands. Trends are overall downward. All three rates are towards the lower end of the per group range.

Chesterfield, Erewash and High Peak are the only districts not to have a male rate significantly lower than England's, although all three are still lower. **Bolsover and Erewash have significantly higher female rates than England,** Dales and High Peak have significantly lower rates. Amber Valley, Dales, North East and South have significantly lower rates than England; Erewash has a significantly higher rate.

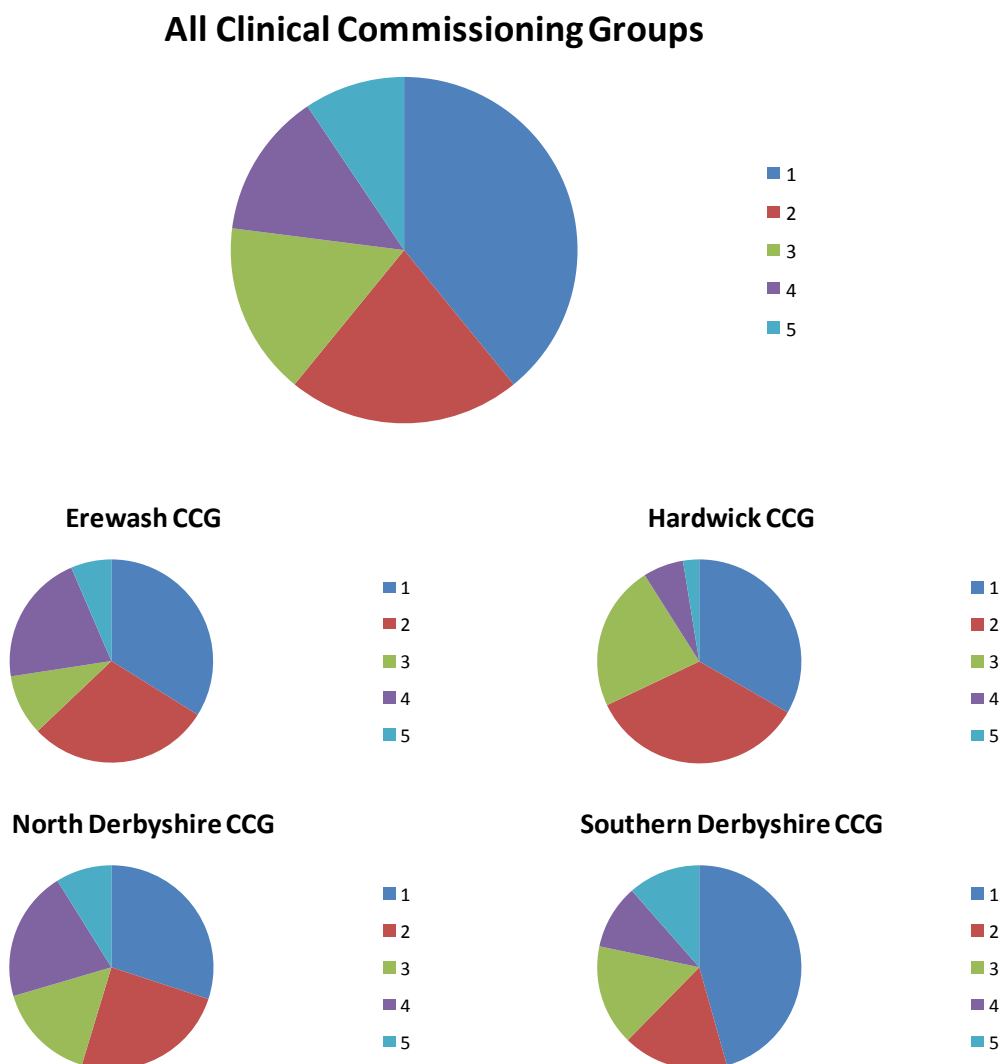
The male admission rate is significantly lower than for England and the ONS clusters in all CCGs except Erewash, where it is higher than for the cluster and significantly higher than for England. Erewash and Southern show falling trends; Hardwick and North increasing. However, Erewash shows a significant increase on the previous year and North a significant decrease.

The female rate is higher than for England in Erewash and significantly higher in Hardwick, but lower in Southern and significantly lower in North. Compared to the ONS clusters Erewash and Hardwick are both higher, Hardwick significantly so; North and Southern are both significantly lower. Erewash and Hardwick have upward trends, but whereas Erewash shows a steady increase with no significant changes year on year, Hardwick's rate has almost doubled the previous year's rate. Neither North nor Southern CCG shows significant changes. The all person rate is higher than for England in Hardwick and significantly higher in Erewash; it is significantly lower in both North and southern. Erewash has a higher rate than the cluster, but not significantly so; Hardwick has a lower rate, North and Southern a significantly lower rates. Erewash, Hardwick and North show upward trends with no significant change in the last year; Southern's trend is downwards.

### 2.2.2 Hospital admissions: deprivation

There were 800 admissions with chronic liver disease, 730 of which had alcoholic liver disease. In both cases approx. two thirds of admissions were of males. **Two fifths of admissions were from the most deprived quintile** and three fifths from the two most deprived quintiles. By CCG, there were 72 admissions for chronic liver disease in Erewash, 82 in Hardwick, 213 in North and 433 in Southern. For alcoholic liver disease there were 66 in Erewash, 77 in Hardwick, 191 in North and 396 in Southern.

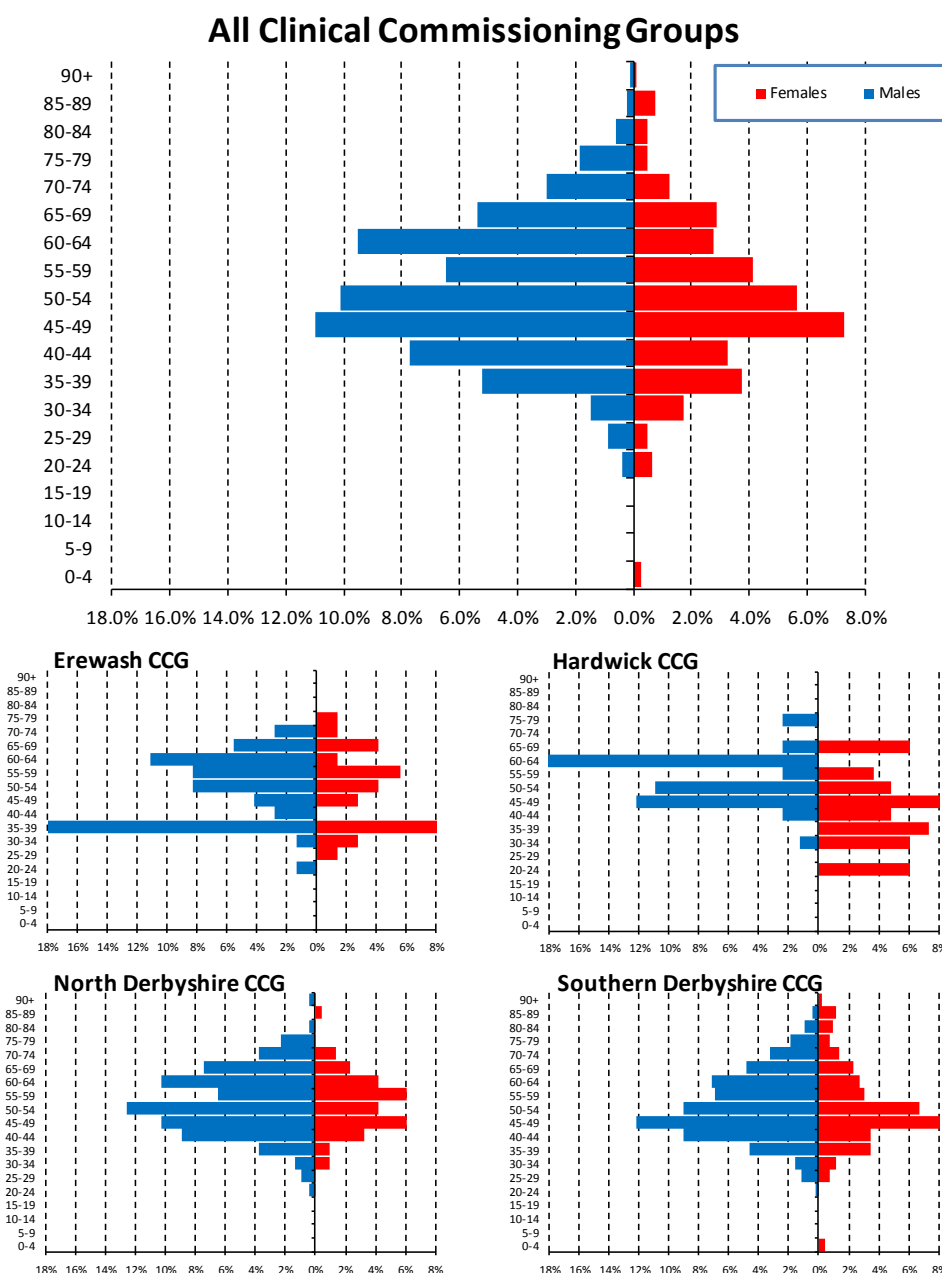
**Figure 6 Non-elective admissions for chronic liver disease by deprivation**



### 2.2.3 Hospital admissions: age and gender

Compared to all liver disease, chronic and alcoholic liver disease hospital admissions peak at a younger age, between 45-65 for men and 45-55 in women.

Figure 7 Non-elective admissions for chronic liver disease by age and sex



### 2.2.4 Chronic liver disease mortality

The male rate for Derbyshire is lower than for both England and East Midlands, but not significantly so. There is no clear trend. The female rate is higher than for both England and Wales, but not significantly so. Again there is no clear trend. **The all person is lower than for both England and East Midlands, but not significantly so.** There is no clear trend. The female rate is toward the upper end of the peer group, the male and all person rates are middling for the peer group.

The male rate for Derby is significantly higher than for both England and East Midlands, as are the female and all person rates. The trends for all three are upwards, but with no significant year on year changes. All rates are towards the upper end of the peer group range.

Apart from the female rate for Erewash, the district rates are not significantly different from the England rate. There are no clear trends.

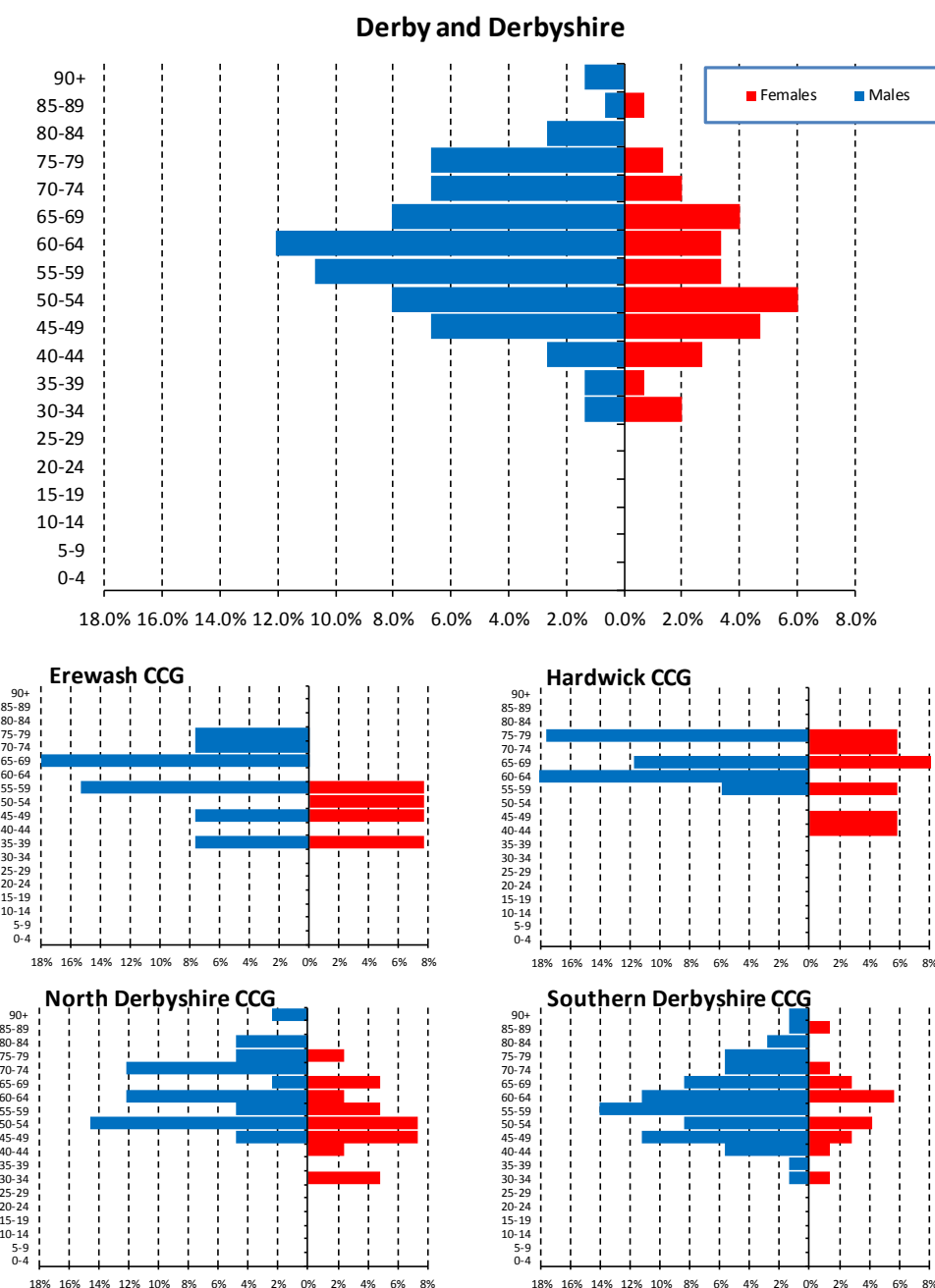
The male mortality rate is higher than for England in Erewash and Southern CCGs and significantly so in Southern. There is an upward trend in Southern CCG but without significant year on year changes. The female rate is also higher than for England in Erewash and Southern CCGs but in this case Erewash is significantly higher. There is a marked upward trend in Erewash's rate, but with no significant year on year change. The all person rates for Erewash and Southern CCGs are higher than for England but only Southern's rate is significantly higher.

### 2.2.5 Mortality: age and gender

In 2014, there were 107 deaths with an underlying cause of chronic liver disease across the county and 42 in Derby. In the county 89 of these were of people aged under 75; in Derby all but 2 were aged under 75.

There were 13 deaths of people registered to Erewash CCG, 12 of which were premature; 17 deaths in Hardwick, 13 of which were premature; 41 deaths in North, of which 35 were premature; 71 deaths in Southern, of which 62 were premature. **Mortality from chronic liver disease peaks between the ages of 55 and 65 in men and somewhat earlier in women.** Compared to the age profile of all liver disease deaths (see 2.1.7) chronic liver disease peaks at a much earlier age.

Figure 8 Mortality from chronic liver disease by age and sex



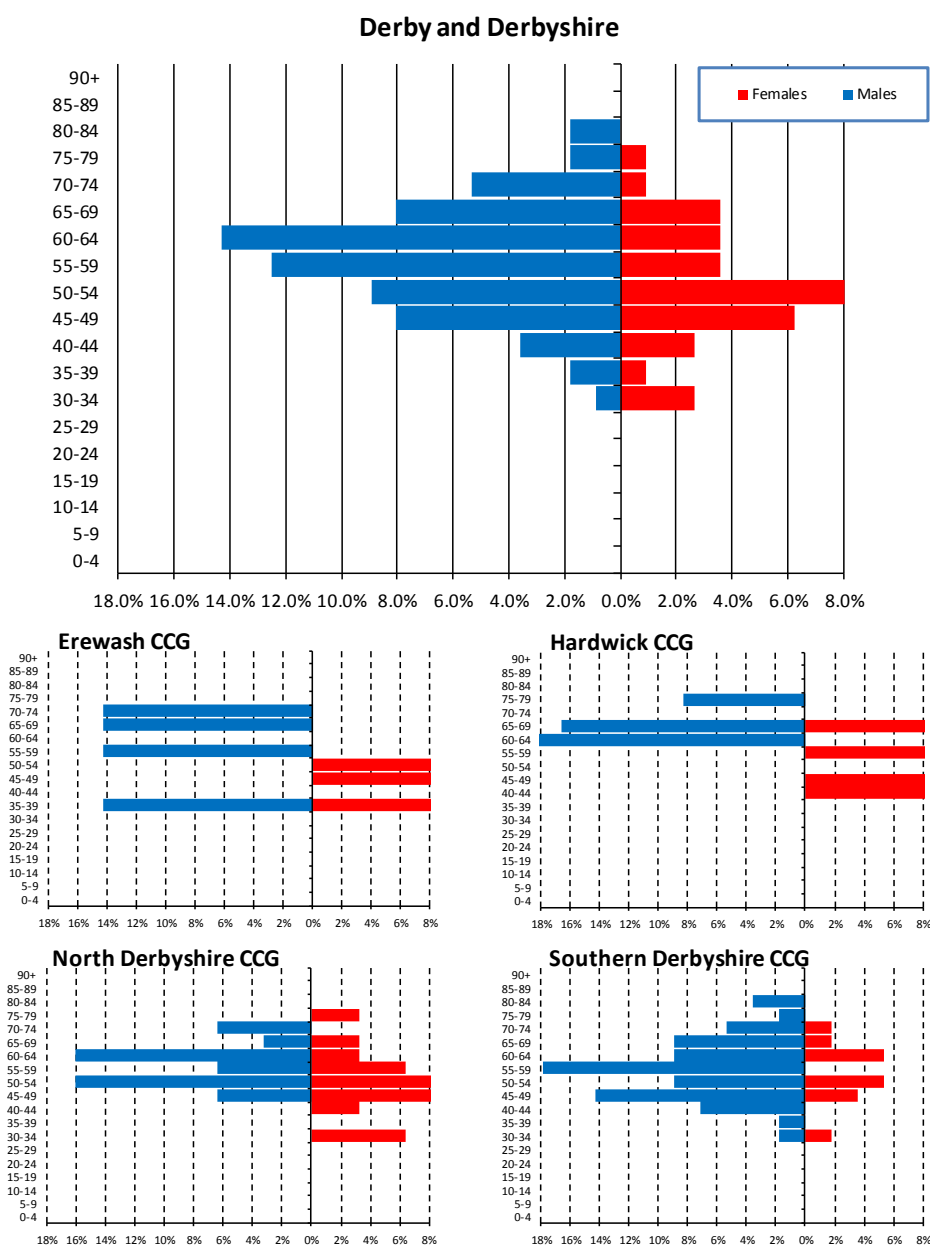
### 2.2.6 Alcoholic liver disease mortality

The Derbyshire male rate is significantly higher than for both England and East Midlands. The trend is downward though there is no significant change from the previous year. For women the rate is higher for both England and East Midlands, but not significantly so. The trend is upward but there is no significant change from the previous year. **The all person rate is significantly higher than for both England and East Midlands.** There is no discernible trend. All three rates are towards the middle of the peer group range.

For Derby the male and all person rates are significantly higher than for both England and East Midlands; the female rate is higher but not significantly so. All three rates are towards the upper end of the peer group range and the male rate is the highest in the group.

In 2014, there were 77 deaths with an underlying cause of alcoholic liver disease across the county and 35 in Derby. In the county 72 of these were of people aged under 75; in Derby all were aged under 75. There were 7 deaths of people registered to Erewash CCG, all of which were premature. There were 12 deaths in Hardwick, 11 of which were premature. There were 31 deaths in North, of which 30 were premature. There were 56 deaths in Southern, of which 53 were premature.

**Figure 9 Mortality from alcoholic liver disease by age and sex**



**Mortality from alcoholic liver disease peaks between the ages of 55 and 65 in men and between 45 and 55 in women, who again die in considerably fewer numbers.** In 2014 in Derby and Derbyshire there were 106 deaths, 73 of which were of men and 33 of women.

## 2.3 Non-alcoholic fatty liver disease

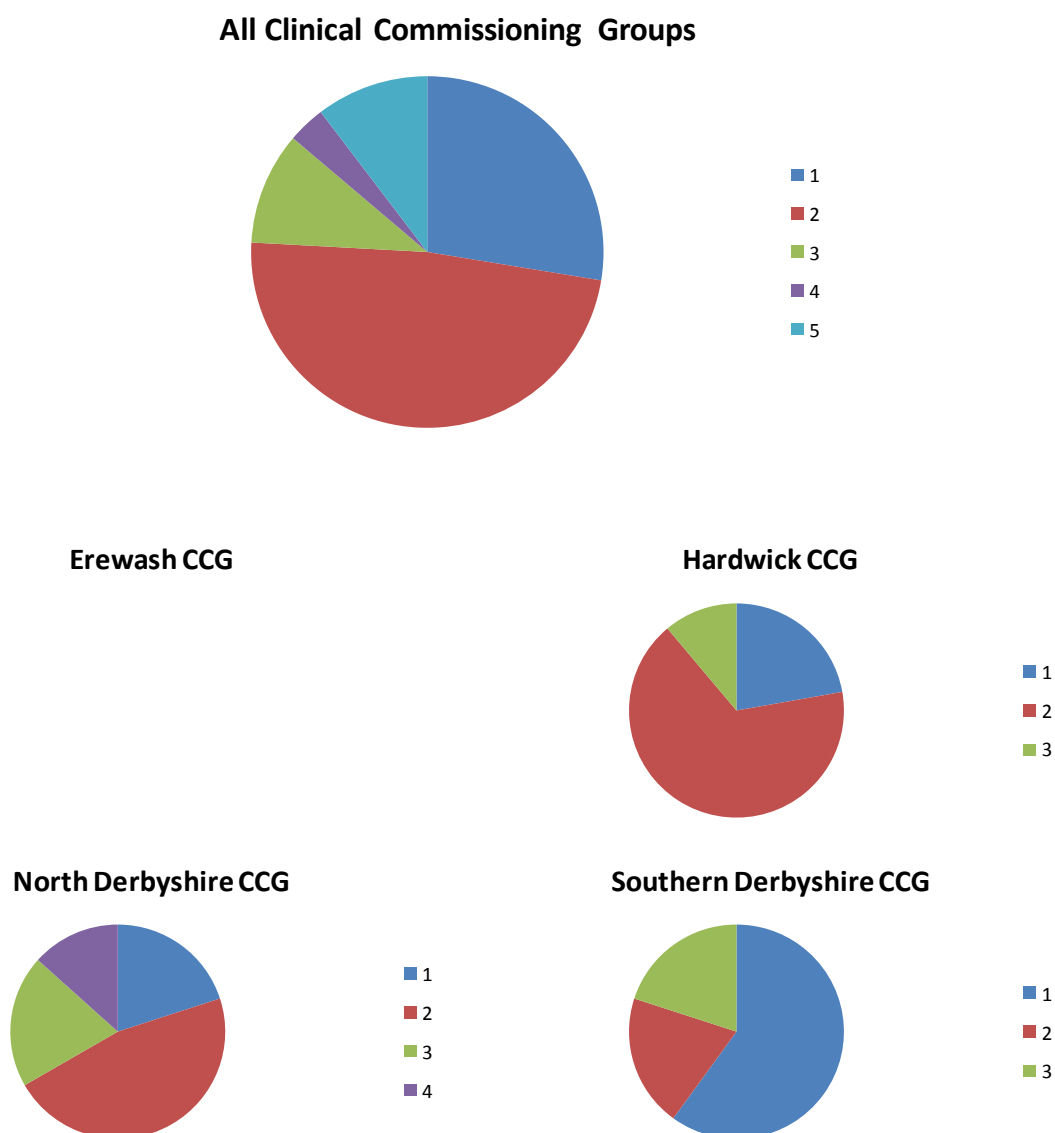
### 2.3.1 Hospital admissions

**The Derbyshire hospital admission rate for non-alcoholic fatty liver disease (NAFLD) is higher than for East Midlands and significantly higher than for England, accounting for 34 admissions in the latest year.** The Derby rate is significantly higher than for England and East Midlands, with 18 admissions in the last year. **Derbyshire is towards the upper end of its peer group range, whilst Derby is highest of the few available peers.**

### 2.3.2 Hospital admissions: deprivation

There were 30 non-elective admissions for non-alcoholic fatty liver disease, 60% of which were of females. Over a quarter of the total was admissions from the most deprived quintile and **over three quarters were from the two most deprived quintiles.** By CCG there were no admissions in Erewash, 9 in Hardwick, 16 in North and 5 in Southern.

**Figure 10 Non-elective admissions for non-alcoholic fatty liver disease by deprivation**





### 2.3.3 Hospital admissions: age and gender

There were too few admissions to support meaningful analysis by age and gender

### 2.3.4 Premature mortality

**The under 75 mortality rate from non-alcoholic liver disease (NAFLD) is similar to the rates for England and East Midlands** and accounts for 16 deaths in the last 3 years. The Derby rate is at a similar level and accounts for 5 deaths in the last 3 years. Both rates are in the mid-range for their peer group.

In 2014 there were 9 deaths with underlying cause of NAFLD across the county and 2 in Derby. In the county 8 of these were of people aged under 75; in Derby 1 was aged under 75.

There were two deaths of people registered to Erewash CCG both premature; Hardwick 1 death, premature; North 3 deaths 2 premature; Southern 5 deaths, 4 premature. There were too few deaths to construct any age and sex analysis.

## 2.4 Hepatitis related liver disease

### 2.4.1 Hospital admissions

There were fewer than 6 hospital admissions for **hepatitis B** related end-stage liver disease/hepatocellular carcinoma, meaning data has been suppressed for both Derby and Derbyshire and no comparison is available.

### 2.4.2 Premature mortality

The under 75 mortality rate from **hepatitis B** related end-stage liver disease/hepatocellular carcinoma is lower in Derbyshire, but not significantly so, than for both England and East Midlands, with fewer than 2 death every 3 years. For Derby the rate is higher than for East Midlands and lower than for England, but is based on only 1 death every 3 years. The rates for both are towards the middle of their peer groups.

### 2.4.3 Hospital admissions

The hospital admission rate for **hepatitis C** related end-stage liver disease/hepatocellular carcinoma is significantly lower than for England and lower than East Midlands. For Derby it is higher than for England and significantly higher than for East Midlands. Derbyshire is mid-range in its peer group as is Derby, although few of its peers have publishable rates.

### 2.4.4 Premature mortality

The under 75 mortality rate from **hepatitis C** related end-stage liver disease/hepatocellular carcinoma is lower, but not significantly so, than for both England and East Midlands, with fewer than 10 deaths every 3 years. Derby also has a lower rate than either England or East Midlands, but based on only 3-4 deaths every 3 years. Both Derby and Derbyshire are mid-range in their peer group.

### 3 INDICATORS OF RISK FACTORS FOR LIVER DISEASE: ALCOHOL

#### 3.1 Alcohol use: prevalence estimates<sup>1</sup>

The risk of alcohol related disease increases with higher risk drinking; liver disease risk is increased 13 times and the risk of coronary heart disease by 1.7 times for men and 1.3 times for women.<sup>2</sup> Responses to the Opinions and Lifestyles Survey (OPN) reported in the HSCIC 'Statistics on Alcohol – England 2014' report indicate that between 2005 and 2012 the proportion of both men and women that drank in the week prior to being interviewed had reduced (72%-64% for men and 57%-52% for women). Of those that did drink in the previous week just over half of both men and women drank more than the recommended daily amounts, with just under a third of men and a quarter of women drinking twice the recommended amounts in 2012. The 45-64yr age group had the highest percentage of both male and female respondents that had drunk in the last week.

Utilising data from the 2013 Opinions & Lifestyles Survey<sup>3</sup> the figures below indicate that **East Midland's levels of abstinence and alcohol use are close to the national average** when looking at the proportion of the population that do not drink, those that drank in the last week and those that had drunk alcohol on five or more days in the week before being interviewed.

Figure 12 Regional Percentage of Teetotallers

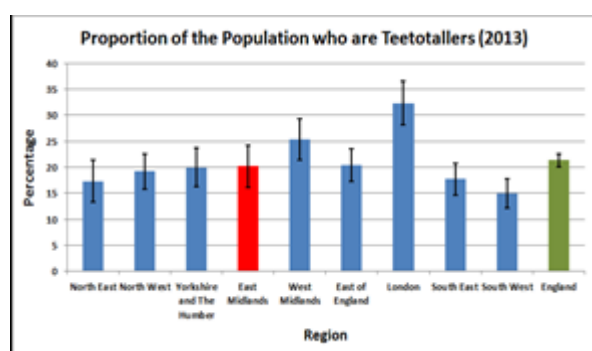


Figure 11 Regional Percentage - Drank Alcohol in the Past Week

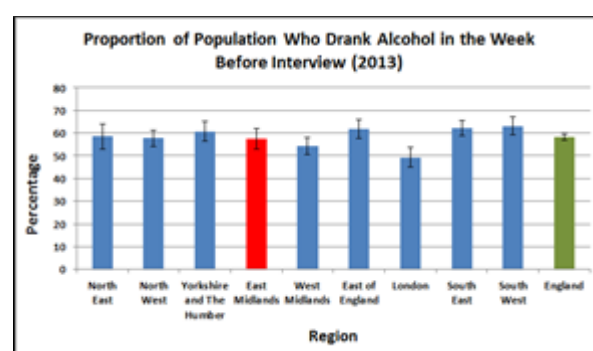
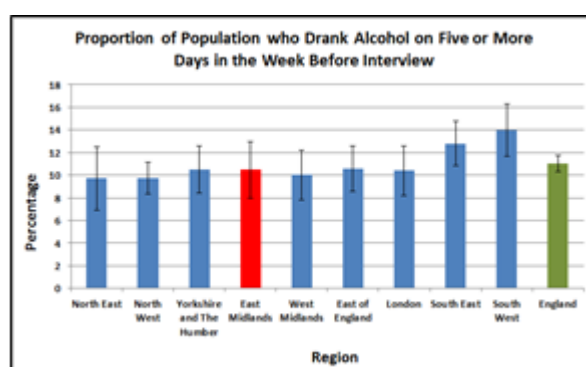


Figure 13 Regional Percentage - Drinking 5 or More Days in the Past Week



HSCIC 2015 reporting indicates that more than one in five adults (21%) said that they do not drink alcohol at all in 2013, which is a slight increase on the 19% reported in 2005. Young adults (16-24yrs) were primarily responsible for this change, due to the proportion of young adults reporting that they do not drink alcohol at all increasing between 2005 and 2013. Additionally the proportion of adults who binged at least once in the week before interview

<sup>1</sup> HSCIC (2014) 'Statistics on Alcohol England 2014.' Available at <http://www.hscic.gov.uk/catalogue/PUB14184/alc-eng-2014-rep.pdf>

<sup>2</sup> PHE (2014) 'Alcohol Data: JSNA Support Pack'

<sup>3</sup> ONS (2015) 'Standard Errors for Adult Drinking Habits in Great Britain, 2013.' Available at <http://www.ons.gov.uk/ons/publications/reference-tables.html?edition=tc%3A77-388641>

decreased to 15% in 2013 (18% in 2005), and again young adults were mainly responsible, with the proportion that had binged falling by more than a third since 2005 (29% to 18% in 2013).<sup>4</sup>

The same report also indicated **that alcohol consumption amongst young people has also fallen in recent years**; in 2013, 39% of year 7 to 11 pupils said that they had drunk alcohol at least once which continues the downward trend since 2003 (when 61% of pupils had drunk alcohol). This latest percentage is lower than at any time since 1988, when the survey first measured the prevalence of drinking in this age group.

When looking at differences in the drinking patterns of males and females, in 2013<sup>4</sup> :-

- 15% of men and 20% of women did not drink any alcohol in the last year;
- 63% of men and 64% of women drank at levels indicating lower risk of harm;
- 18% of men and 13% of women drank at an increased risk of harm;
- 5% of men and 3% of women drank at higher risk levels .

As regards age groups and higher risk drinking, the 2012 Health Survey for England reported that for **males higher risk drinking was most likely between the ages of 55-64, but amongst females there was little variation in the proportion who drank at this level between the ages of 16-64yrs.**<sup>5</sup>

As regards drinking practices<sup>4</sup> 2010-2013 household spending on food and drink fell by 3.2% and eating out expenditure by 5.6%. Additionally household spending on alcoholic drinks fell by 5.7% over the same period, whilst alcoholic drinks bought for consumption outside the home fell by 13.4%. This change indicates the increased potential for harmful levels of drinking to be ever more hidden as the reduction in spending on alcohol drinks for consumption within the home is much less than the reduction on spending for consumption outside of the home. This raises concerns as regards addressing unmet need, hidden harm and successful engagement with prevention work.

By applying the East Midlands synthetic estimates<sup>6</sup> (2009) of abstinence, lower, increasing and higher risk levels of alcohol consumption estimates for the Derbyshire adult population (16 yrs. and over, mid 2013 population estimates) can be attained. This provides an indication of the numbers drinking at different levels within Derbyshire, but should be treated with caution given the wide confidence intervals. The table below provides an overview of this information, with an additional overview of definitions for the different levels of drinking:-

**Table 1 Derbyshire Synthetic Estimates of Drinking (based on East Midlands region percentages)**

Level of Drinking	Percentage (16yrs+)	Number
Abstainers	<b>15.81%</b> (10.52%-19.80%)	<b>101,251</b> (67,374-126,848)
Lower Risk Drinking*	<b>73.27%</b> (51.32%-86.30%)	<b>395,090</b> (276,760-465,398)
Increasing Risk Drinking*	<b>20.06%</b> (10.82%-38.68%)	<b>108,151</b> (58,355-208,566)
Higher Risk Drinking*	<b>6.68%</b> (2.36%-21.5%)	<b>36,018</b> (12,719-115,914)

- Higher risk drinking is defined as usual consumption of more than 50 units of alcohol per week for males, and more than 35 units of alcohol per week for females

<sup>4</sup> HSCIC (2015) 'Statistics on Alcohol England 2015.' Available at <http://www.hscic.gov.uk/catalogue/PUB17712>

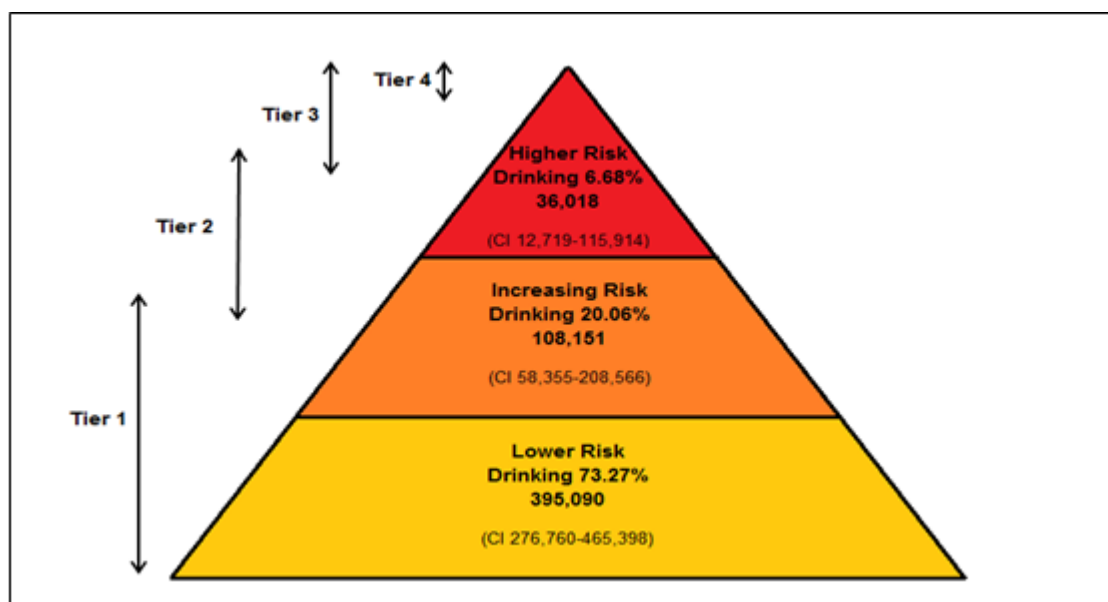
<sup>5</sup> HSCIC (2015) 'Statistics on Alcohol England 2015.' Available at <http://www.hscic.gov.uk/catalogue/PUB17712>

<sup>6</sup> LAPE (2014) 'Local Authority alcohol indicators for crime and consumption only (updated 3/9/2014).' Available at <http://www.lape.org.uk/data.html>

- Increasing risk drinking is defined as usual consumption of between 22 and 50 units of alcohol per week for males, and between 15 and 35 units of alcohol per week for females
- Lower risk drinking is defined as usual consumption of fewer than 22 units of alcohol per week for males, and fewer than 15 units of alcohol per week for females

Figure 14 below provides a general overview of thresholds for alcohol Tiered Services activity (see pp 23) in terms of levels of drinking (this diagram should be used as a guide only):-

**Figure 14 Derbyshire Synthetic Estimates of Drinking (based upon East Midlands Percentages) and Tiered Service Intervention**



## 3.2 Alcohol harm

Data is routinely collected on a range of indicators relating to alcohol harm (see Table 2 below). **All show an increasing trend in Derbyshire**, and those specific or narrowly related to alcohol (ie most indicative of alcohol harm) are **significantly higher than the values for England for females (alcohol specific) and for males and females (alcohol related)**.

### 3.2.1 Alcohol specific hospital admissions

The rate of **men** admitted to hospital with alcohol-specific admissions in Derbyshire is significantly lower than for England but **significantly higher than for East Midlands**; the trend shows a **significant increase** from the previous year. **The rate for women is significantly higher than for both England and East Midlands** and shows a significant increase from the previous year. The all person rate is lower than the England rate but significantly higher than for East Midlands; **there is a significant increase from the previous year. All three rates are at the upper end of the peer group range.**

In Derby the male, female and all person rates are significantly higher than for England and the East Midlands. All three rates are however towards the middle of the peer group range. The trends are all upwards with a significant increase in the all person rate in the latest year.

Amongst the districts the male rate is significantly higher in Chesterfield (highest) and High Peak, and significantly lower in Amber Valley, Dales, North East and South (lowest). For all district there is an upward trend, but no significant increase on the previous year. For females: Chesterfield (highest) and High Peak had significantly higher rates; only South had a significantly lower rate; all trends were upward but with no significant change from the previous year. For **the all person rate, Chesterfield (highest) and High Peak are significantly higher**, Amber Valley, Dales and South (lowest) had significantly lower rates, trends were all upward but with no significant change from the previous year.

Table 2 Hospital Admissions - Rates (DSR) per 100,000 population

Category	Time Period	Persons (P)/ Male (M)/ Female (F)	Indicator	England	East Midlands	Derbyshire
Hospital Admissions	2011/12 -13/14	P	5.01 - Alcohol-specific hospital admission - under 18s	40.1	33.8	45.4 ↑
Hospital Admissions	2013/14	P	6.01 - Alcohol-specific hospital admission (Persons)	374	318	368 ↑
Hospital Admissions	2013/14	M	6.01 - Alcohol-specific hospital admission (Male)	515	428	480 ↑
Hospital Admissions	2013/14	F	6.01 - Alcohol-specific hospital admission (Female)	241	213	259 ↑
Hospital Admissions	2013/14	P	7.01 - Alcohol-related hospital admission (Broad) (Persons)	1253	1134	1189 ↑
Hospital Admissions	2013/14	M	7.01 - Alcohol-related hospital admission (Broad) (Male)	1715	1542	1600 ↑
Hospital Admissions	2013/14	F	7.01 - Alcohol-related hospital admission (Broad) (Female)	859	784	836 ↑
Hospital Admissions	2013/14	P	8.01 - Alcohol-related hospital admission (Narrow) (Persons)	444	440	479 ↑
Hospital Admissions	2013/14	M	8.01 - Alcohol-related hospital admission (Narrow) (Male)	594	584	626 ↑
Hospital Admissions	2013/14	F	8.01 - Alcohol-related hospital admission (Narrow) (Female)	310	310	348 ↑
Hospital Admissions	2013/14	P	9.01 - Admission episodes for alcohol-related conditions (Broad) (Persons)	2111	1934	1997 ↑
Hospital Admissions	2013/14	M	9.01 - Admission episodes for alcohol-related conditions (Broad) (Male)	2917	2637	2703 ↑
Hospital Admissions	2013/14	F	9.01 - Admission episodes for alcohol-related conditions (Broad) (Female)	1426	1332	1397 ↑
Hospital Admissions	2013/14	P	10.01 - Admission episodes for alcohol-related conditions (Narrow) (Persons)	645	674	718 ↑
Hospital Admissions	2013/14	M	10.01 - Admission episodes for alcohol-related conditions (Narrow) (Male)	835	858	898 ↑
Hospital Admissions	2013/14	F	10.01 - Admission episodes for alcohol-related conditions (Narrow) (Female)	475	508	557 ↑

Compared to the previous reporting period:	Same ↔	Increased ↑	Decreased ↓
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Compared to England:		
Better	Similar	Worse

The male rate is higher in Erewash and North CCGs than for England, but not significantly so; these rates are also higher than for the ONS cluster (Manufacturing Towns). The rate in Southern is significantly lower than for both England and the ONS cluster (Centres with Industry). The trends for all CCGs are upward, but without any significant change year on year, except for Southern where in the last three years a significant fall has been followed by a significant increase. The female rate is significantly higher than for England and the ONS cluster in Hardwick and North CCGs, but significantly lower than its cluster for Southern CCG. Trends are upward for all CCGs except for Southern which is slightly downward, but there is no significant year on year changes. The all person rate is significantly higher in North CCG than for England and the ONS cluster. The Southern CCG rate is significantly lower than for both England and the ONS cluster. The trends for all CCGs are upward, but without any significant change year on year, except for Southern where in the last three years a significant fall has been followed by a significant increase.

### 3.2.2 Alcohol-specific hospital admission - under 18s

The rates for both Derby and Derbyshire are higher than for both England and East Midlands. The overall trends for both are downwards with a small increase in Derbyshire in the latest year. The rates for both Derby and Derbyshire are towards the middle range of their respective peer groups. Bolsover, Chesterfield, High Peak and North East have higher rates than England; **High Peak's is significantly higher.**

### 3.2.3 Alcohol-specific mortality

The male rate in Derbyshire is significantly lower than for England and lower than for East Midlands. The trend is downwards, but the year on year change is not significant. The Derby rate is significantly higher than for both England and East Midlands. The trend is upwards, but with no significant year on year changes. The female rate in Derbyshire is higher than for both England and East Midlands, but not significantly so. There is no discernible trend. The Derby rate is also higher than for England and East Midlands, but not significantly so. The trend is downwards but again with no significant year on year change. **The Derbyshire all person rate is lower than for both England and East Midlands, but not significantly so.** There is a slight downward trend. The Derby rate is significantly higher than for both England and East Midlands. The trend is upwards, but again with no significant year on year changes. All three rates are towards the middle of the peer group range for Derbyshire. For Derby, all three are at the upper end of the peer group range and the male rate is the highest in the group.

At District level the highest male rate is in Chesterfield, but this is not significantly different from England; the rate for North East is the lowest and significantly lower than England's. **The female rate for Erewash is significantly higher than for England;** no other district rate is significantly different. The all person rates for Dales and North East are significantly lower than for England, but no other district rates are significantly different. There are no clear trends in the district rates.

The male rate is significantly higher than for England in Southern CCG; the rate is lower, though not significantly, than the ONS cluster rate (Centres with Industry). There is a notable upward trend in Southern CCG, but without significant year on year changes. North CCG has a significantly lower rate than the ONS cluster (Manufacturing Towns). For females, Erewash CCG has a significantly higher rate than England, this is also higher than the cluster rate, but not significantly so. There is a marked upward trend, but without significant year on year changes. The all persons rate for Southern CCG is significantly higher than for England, but lower than the cluster rate, though not significantly. There is an upward trend. Other rates are not significantly different from England or the respective cluster rates. Other trends appear to be downward, but without significant year on year changes.

## 3.3 Alcohol services: Tier 1 prevention

The knowledge base and confidence of frontline health and other workers in addressing substance use is key to effective prevention and early intervention activities within Derbyshire. Work is ongoing within the county to strengthen and maximise these opportunities through programmes such as 'Healthy Workplaces Derbyshire,' MECC (Making Every Contact County), IBA (Identification and Brief Advice) training, Hospital Liaison teams, joint working with CCGs (Clinical Commissioning Groups) and Health Check programmes for 40-70 year olds delivered in primary care.

Public Health is a responsible authority for licensing, which affords the opportunity to take a more proactive role in addressing health harms. In addition a considerable amount of work is ongoing to train staff at licensed premises as regards responsible serving and recognising when someone is intoxicated. The 'Intoxicated' brand is used throughout Derbyshire in on-license premises, focussing primarily on prevention activity.

Whilst the great majority of people that drink alcohol do not need to access treatment services, the delivery of IBA where relevant could have considerable health benefits if it motivates a person to be more aware of and reduce their level of drinking.

### **3.3.1 NHS Health Check Programme - alcohol**

The cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check in both Derby and Derbyshire is significantly higher than in England and East Midlands. The percentage of those offered a Health Check who received one is significantly higher than England in Derbyshire and similar to England in Derby. Compared to East Midlands Derby and Derbyshire are significantly lower. The percentage of the total population who have received a Health Check in Derbyshire is significantly higher than for England, while for Derby the percentage is significantly lower than for East Midlands. All the rates for Derby and Derbyshire are middling within their peer groups.

Alcohol screening was incorporated into the health check process in 2012. All attendees should initially be assessed for potential increasing or higher risk drinking using the brief screening Audit-C tool comprising of 3 simple questions. If there is an indication of increasing or higher risk drinking, the full Audit-C alcohol screen should be completed which comprises a further 7 questions to ascertain whether alcohol intake levels indicate a lower, increasing or higher risk, or possible dependence.

Data are based on the period April 2010 to March 2015 for GP practices that were participating in Derbyshire County. Glossopdale and Derby City are not included as they were separate to Derbyshire for all or some of the time period. The programme was rolled out on a phased basis; therefore not all practices will have data for the entire period. Data are also reliant on practice quality of recording on their system.

Of the 94,273 40-74 year olds that attended across the 5 years, 82,434 (87%) were recorded as receiving a brief alcohol screen, and of these 11,462 (14%) went on to receive the full alcohol screen.

#### 3.3.1.1 Alcohol intake screening: gender and age

A significantly lower percentage of men were recorded as receiving the brief alcohol screen, at 86% compared to 89% of women.

However, a significantly higher percentage of men were recorded as then receiving the full screen at 17% compared to 11% of women.

Men were 1 ½ times significantly more likely to be given the full screen (OR 1.62, 95% CI 1.56-1.69, p<0.001).

A significantly higher percentage of 40-49 year olds received the brief screen compared to those aged 50+ years, in both men and women (Figure 15).

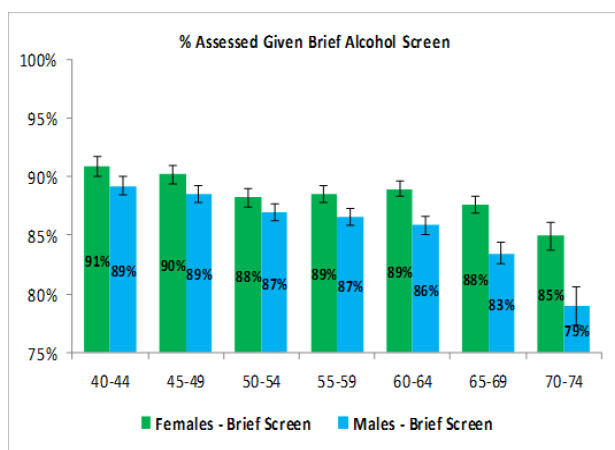
And a significantly higher percentage of 40-49 year olds went on to have the full screen compared to those aged 50+ years, in both men and women (Figure 16).

Men and women aged 40-49 were between 30%-40% significantly more likely to be given the full screen compared to those aged 50+ years (OR 1.36, 95% CI 1.31-1.42, p<0.001).

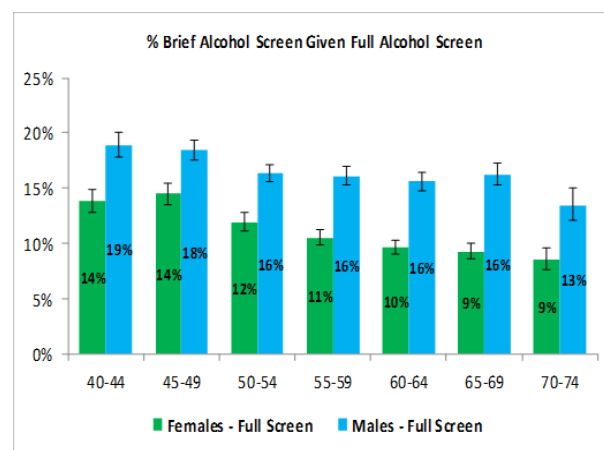
#### 3.3.1.2 Alcohol intake screening: deprivation

A significantly higher percentage in the two most deprived quintiles were recorded as receiving the brief alcohol screen compared to the average and those in the two least deprived quintiles, for both men and women (Figure 17). However, in women a significantly lower percentage of those in Quintile 1 went on to have a full alcohol screen. In both men and women, a significantly higher percentage in Quintile 3 had the full screen (Figure 18).

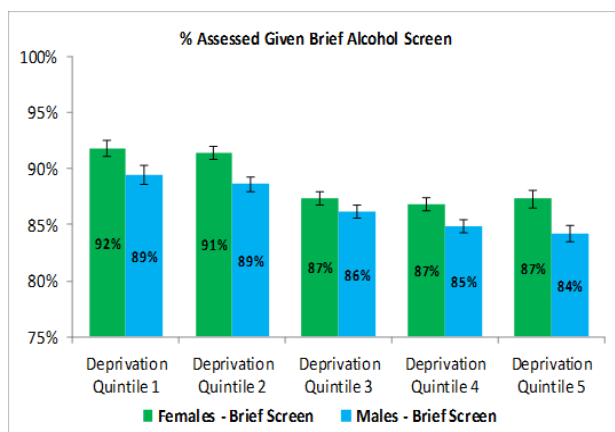
**Figure 15 Percentage assessed given brief alcohol screen, by age and sex**



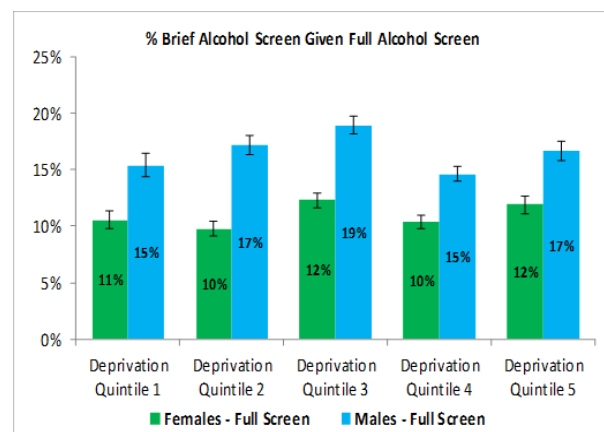
**Figure 16 Percentage given brief alcohol screen given full alcohol screen, by age and sex**



**Figure 17 Percentage assessed given brief alcohol screen, by deprivation**



**Figure 18 Percentage given brief alcohol screen given full alcohol screen, by deprivation**



### 3.3.1.3 Alcohol intake screening: analysis by CCG

#### Erewash CCG

- 90% were recorded as receiving the brief alcohol screen.
- The CCG had the highest percentage given a full alcohol screen at 27%.

#### Hardwick CCG

- Nearly 100% were recorded as receiving the brief alcohol screen.
- 16% went on to have the full alcohol screen.

#### North Derbyshire CCG

- 84% were recorded as receiving the brief alcohol screen, significantly lower than the average.
- 8% had the full alcohol screen, significantly lower than the average.

#### Southern Derbyshire CCG

- 86% were recorded as receiving the brief alcohol screen, significantly lower than the average
- 16% went on to have the full alcohol screen



**Table 3 Alcohol Screening by CCG**

	Assessed	Brief Alcohol Screen	% of Assessed		Full Alcohol Screen	% of Brief Alcohol Screen	
Total	94,273	82,434	87%		11,462	14%	
Erewash CCG	13,432	12,084	90%	▲	3,222	27%	▲
Hardwick CCG	13,604	13,434	99%	▲	2,087	16%	▲
North Derbyshire CCG	44,278	37,131	84%	▼	3,080	8%	▼
Southern Derbyshire CCG	22,959	19,785	86%	▼	3,073	16%	▲

Significance is compared to the Average

### 3.3.1.4 NHS Health Check Programme – Alcohol Advice Given, Brief Intervention and Service Referrals

Analysis by CCG reveals clear disparities in the recording of those given the full alcohol screen that then receive advice, a brief intervention or are referred to alcohol services (Table 4). **An extremely low proportion (0.3-0.4%) of those given the full alcohol screen (ie assessed as having an indication of increasing or higher risk drinking) appear to have been referred to alcohol support and treatment services.**

**The recording of these data items needs to be further investigated to determine whether it is a true reflection of the health check process.**

An analysis has been completed for the percentage given advice, but any conclusions that can be drawn are limited.

**Table 4 Advice Given, Brief Intervention and Referral of those with a Full Alcohol Screen by CCG**

	Full Alcohol Screen	Advice Given	% of Full Alcohol Screen		Brief Intervention	% of Full Alcohol Screen	Referred to alcohol services	% of Full Alcohol Screen	
Total	11,462	4,386	38%		77	0.7%	29	0.3%	
Erewash CCG	3,222	841	26%	▼	*	*	11	0.3%	
Hardwick CCG	2,087	790	38%		*	*	*	*	
North Derbyshire CCG	3,080	1,537	50%	▲	73	2.4%	12	0.4%	
Southern Derbyshire CCG	3,073	1,218	40%		*	*	*	*	

### 3.3.1.5 Alcohol advice: gender and age

Of those given the full alcohol screen, 4,386 (38%) were recorded as being given alcohol advice.

- A significantly higher percentage of men received advice at 41% compared to 34% of women, due to lower levels in the younger age groups.
- In women, the percentage given advice increased with age although the differences between age groups were not significant.
- In men, proportions were similar across age groups, but significantly higher than women for those aged 40-59 years.

### 3.3.1.6 Alcohol advice: deprivation

The percentage given advice was significantly lower in Quintiles 1 and 2 compared to the average at 31% and 34% respectively.

In Quintile 1 the percentages of both men and women were significantly lower than the average.

The highest percentages given advice in both men and women were in Quintile 4.

### 3.3.2 Tier 1 Identification and Brief Advice (IBA) GP training by Derbyshire Alcohol Advisory Service (DAAS)

The map below shows the distribution of practices with a GP trained by DAAS. There are 18 practices, with trained GPs available in all CCGs except Tameside & Glossop, but none in North East or South districts and none in Derby City. In Glossopdale there is a Local Enhanced Service for alcohol shared care in Glossopdale. Collectively these practices referred 2.18 patients per 1,000 population between April and December of 2014, whilst practices without a trained GP referred at a rate of 1.54 per 1,000, indicating a **slight (albeit not significant) positive impact of training on referral rate**. This could be confounded by level of need if GPs are more likely to access training from areas of high need; however no association was found between practice level deprivation (as a proxy for need) and referral rate.

Figure 17 Percentage given full alcohol screen who were given advice, by age and sex

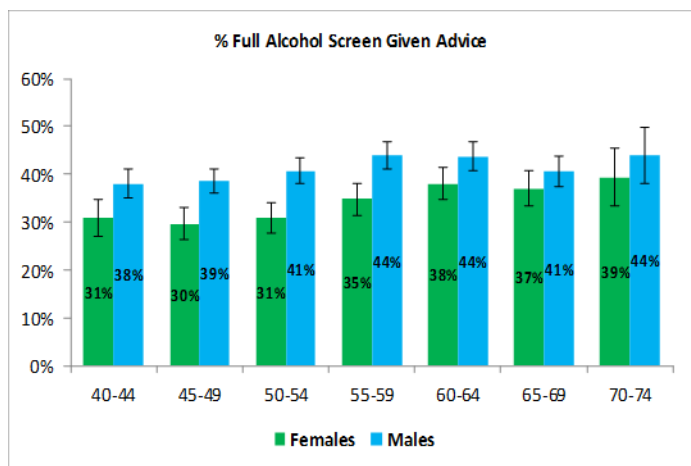


Figure 18 Percentage given full alcohol screen who were given advice, by deprivation

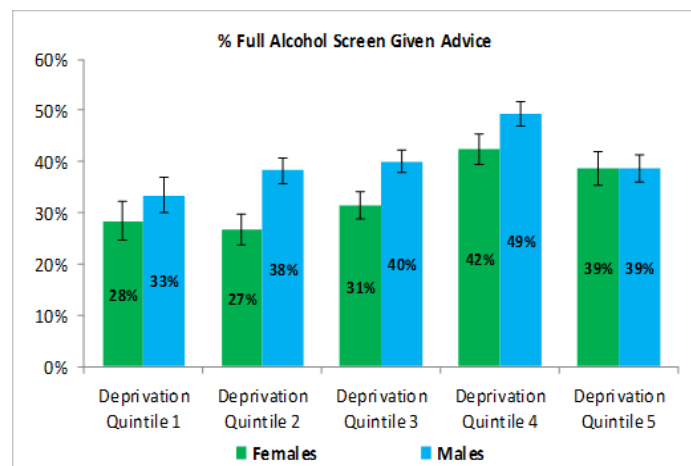
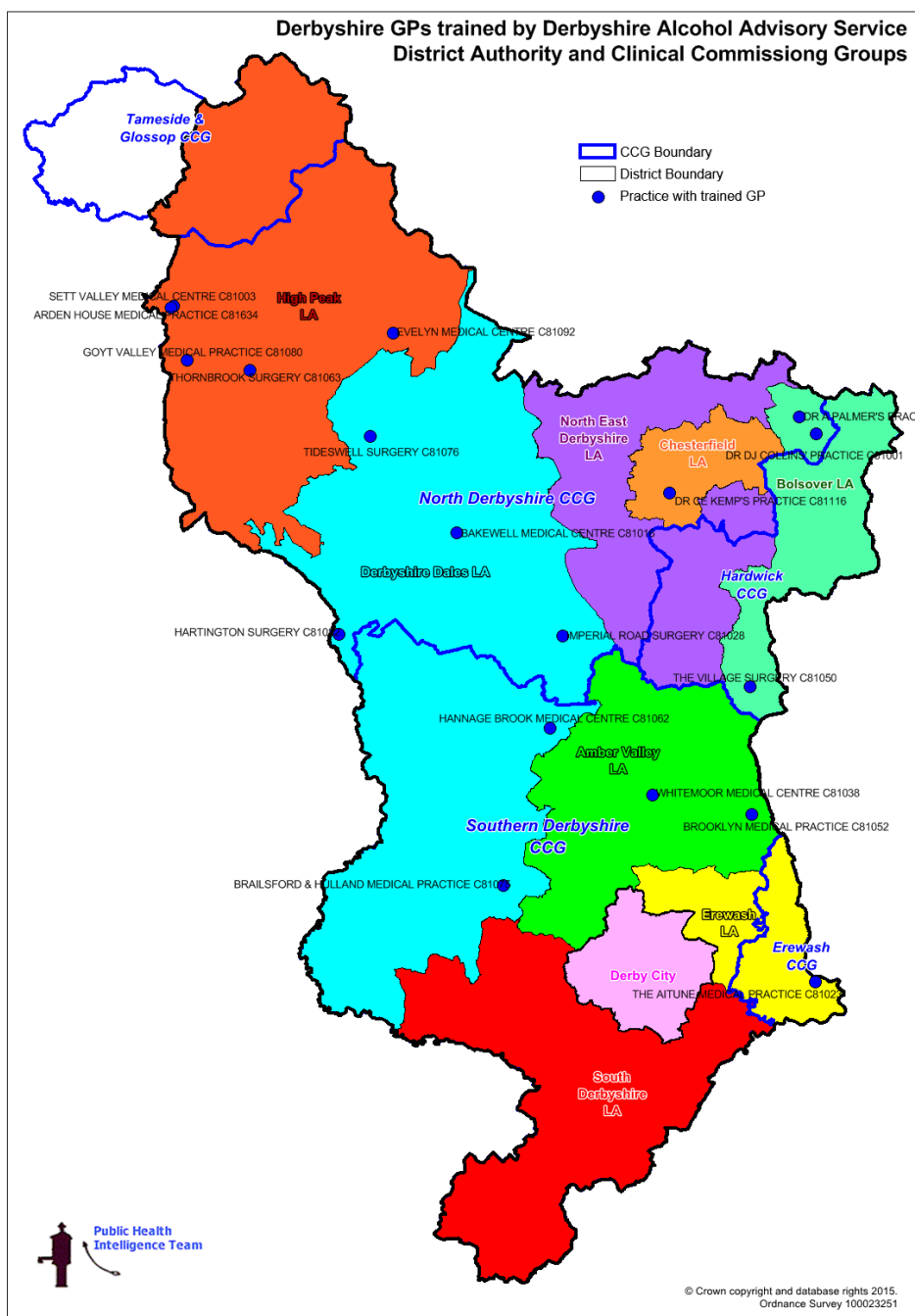


Figure 19 Map of GPs trained by DAAS



### 3.4 Alcohol services Tiers 2<sup>7</sup> and 3<sup>8</sup>: structured alcohol treatment<sup>9,10,11,12</sup>

Referrals into Tier 2 alcohol treatment (there were just under 2,800 during 2014/15) are spread across Derbyshire, with a number of geographical areas having higher rates of referrals into the service, particularly in the north east and north west areas of the county.

During the 2014/15 period approximately a third of Tier 2 referrals were referred on at triage to the Tier 3 service, who received in total just under 1,300 referrals during 2014/15.

Whilst referral data appears to correlate with morbidity and mortality data, there are some geographical areas of the county that are underrepresented as regards referrals into treatment (e.g. Bolsover and North East Derbyshire).

Just under 50% of referrals to the Tier 2 service are self-referrals, with just over a third of referrals being female and 35-54yrs being the peak age of those accessing services (albeit males appear to access the service at a younger age than females). Younger age groups and those aged 60yrs+ make up a much smaller percentage of the treatment population, and could indicate areas of unmet need within the county. Additionally the vast majority of referrals are 'white British' which again could indicate an area of unmet need for certain populations within the county.

Once a referral has been made clients are able to access alcohol treatment quickly<sup>13</sup>. However, locally the average (median) time in structured alcohol treatment is much shorter than seen nationally, and there is a higher percentage of clients leaving in an unplanned way within 12 weeks; as successful completion rates reduce with an increased number of treatment journeys this is an area that needs to be addressed in order to ensure clients are given the best possible chance of completing treatment in a successful way.

Particularly high levels of drinking are reported anecdotally via the Tier 2 service and via national data sources for structured alcohol treatment, which evidences the complexity of some alcohol clients locally. However as regards polysubstance misuse fewer service users locally report using other substances in addition to alcohol, and fewer drug treatment clients cite additional problematic alcohol use than is seen nationally.

Successful completions from structured alcohol treatment are generally in line with national reporting, which would indicate that the shorter length of time in treatment noted above is not having a detrimental impact on outcomes and the service is cost effective. However if this were to be addressed along with the number of unplanned exits within 12 weeks from commencement of treatment, there is the possibility that successful completions from treatment in the future could exceed current reported performance.

Geography and travel were noted as hindering access to treatment in some instances, along with lack of access to buildings. Consultation with service users indicated that more options as regards mutual aid and weekend/evening availability could also improve the alcohol service offered to clients.

<sup>7</sup> Information and advice by specialist services, triage assessment, referral to structured treatment, brief psychosocial interventions, harm reduction services and aftercare (NTA definition)

<sup>8</sup> Community based assessment and structured treatment (including community prescribing, psychosocial interventions and day programmes (NTA definition)

<sup>9</sup> PHE (2015) 'Alcohol Data: JSNA Support Pack'

<sup>10</sup> DAAS (2015) '2014/15 Performance Template'

<sup>11</sup> Addaction (2015) 2014/15 Performance Template'

<sup>12</sup> PHE (2015) 'Diagnostic and Outcomes Monitoring Executive Summary'

<sup>13</sup> National 15 day wait time target

## 4 INDICATORS OF RISK FACTORS FOR LIVER DISEASE: OBESITY

### 4.1 Excess weight – adults

The proportion of adults in Derbyshire who are overweight or obese is estimated to be **significantly higher than for England and higher than for East Midlands**. In Derby the proportion is higher than England and lower than East Midlands, though not significantly so in either case. Both have rates within the mid-range of their peer group. **Amber Valley, Bolsover, Erewash and South Derbyshire are estimated to have a significantly higher proportion than England**. Chesterfield and North East have proportions which are higher but not significantly so.

#### 4.1.1 NHS Health Check Programme: assessed as overweight and obese

##### 4.1.1.1 Overweight and obese: age and gender

**The percentage of men assessed and recorded as overweight is significantly higher than for women, and increases with age in both**. Nearly half of all men assessed were recorded as being overweight. **The reverse is shown in the percentage assessed and recorded as obese, with younger men and women significantly higher compared to the older age groups**. This is line with the known prevalence of obesity decreasing with age. There is no significant difference by age between men and women for obesity, with the exception of a significantly higher percentage of women than men aged 65-74 years.

**Table 5 Assessed as Overweight or Obese by Age and Gender**

	Assessed	Assessed Overweight	% Assessed as Overweight		Assessed Obese	% Assessed as Obese	
Total	94,273	39,073	41.4%		22,727	24.1%	
Females	45,903	16,225	35.3%	▼	11,047	24.1%	
Males	48,370	22,848	47.2%	▲	11,680	24.1%	
F 40-44	4,401	1,351	30.7%		1,179	26.8%	▲
F 45-49	5,303	1,734	32.7%		1,505	28.4%	▲
F 50-54	7,169	2,509	35.0%		1,857	25.9%	▲
F 55-59	8,356	2,954	35.4%		2,013	24.1%	
F 60-64	9,271	3,413	36.8%	▲	2,105	22.7%	▼
F 65-69	7,982	2,978	37.3%	▲	1,675	21.0%	▼
F 70-74	3,421	1,286	37.6%	▲	713	20.8%	▼
M 40-44	5,951	2,657	44.6%	▼	1,693	28.4%	▲
M 45-49	7,938	3,695	46.5%		2,182	27.5%	▲
M 50-54	9,110	4,415	48.5%		2,327	25.5%	▲
M 55-59	8,511	4,045	47.5%		2,114	24.8%	
M 60-64	7,900	3,733	47.3%		1,744	22.1%	▼
M 65-69	6,400	3,064	47.9%		1,219	19.0%	▼
M 70-74	2,560	1,239	48.4%		401	15.7%	▼

Overweight = BMI 25+ minus those recorded as obese Obese = BMI 30+/27.5+ in Asian groups

##### 4.1.1.2 Overweight and obese: deprivation

In both men and women the percentage overweight actually increases as deprivation decreases; the opposite relationship to that of obesity (Table 6). Men are significantly higher than women across all quintiles. Conversely, **the percentage assessed as obese is significantly higher than average in the most deprived quintiles in both men and women**, and is significantly higher in females in Quintile 1 compared to males in Quintile 1, in line with the literature. A third of females in Quintile 1 were assessed as obese compared to the average of 24% and 17% in the least deprived quintile.

Table 6 Assessed as Overweight or Obese by Deprivation quintile

	Assessed	Assessed Overweight	% Assessed as Overweight	Assessed Obese	% Assessed as Obese
Total	94,273	39,073	41.4%	22,727	24.1%
Deprivation Quintile 1	10,915	4,121	37.8% ▼	3,466	31.8% ▲
Deprivation Quintile 2	18,789	7,699	41.0%	5,305	28.2% ▲
Deprivation Quintile 3	22,844	9,665	42.3%	5,531	24.2%
Deprivation Quintile 4	24,095	10,142	42.1%	5,099	21.2% ▼
Deprivation Quintile 5	16,444	6,924	42.1%	3,038	18.5% ▼
F Quintile 1	5,601	1,865	33.3%	1,870	33.4% ▲
F Quintile 2	9,311	3,331	35.8%	2,677	28.8% ▲
F Quintile 3	10,921	3,943	36.1%	2,658	24.3%
F Quintile 4	11,641	4,124	35.4%	2,341	20.1% ▼
F Quintile 5	7,873	2,763	35.1%	1,366	17.4% ▼
M Quintile 1	5,314	2,256	42.5% ▼	1,596	30.0% ▲
M Quintile 2	9,478	4,368	46.1%	2,628	27.7% ▲
M Quintile 3	11,923	5,722	48.0%	2,873	24.1%
M Quintile 4	12,454	6,018	48.3%	2,758	22.1% ▼
M Quintile 5	8,571	4,161	48.5%	1,672	19.5% ▼

Female/Male Significance is compared to gender average

#### 4.1.2 NHS Health Checks: advice given and referral to weight management services

##### 4.1.2.1 Advice given: age and gender

The following is based on recorded data and therefore may not be a true reflection of actual practice.

Of those assessed obese:-

- 74% were given general lifestyle advice;
- 57% were given weight/diet advice.

In those assessed as overweight:-

- 66% were given general lifestyle advice;
- 47% were given weight/diet advice.

In general, a higher percentage of men were given advice compared to women, and a higher proportion of older age groups compared to younger (Figures 20 and 21). Young, overweight males and females were the lowest percentage to be given advice. The numbers may be a reflection of poor recording highlighting the need for good data quality; however, from a preventative perspective the proportion of younger age groups given advice should be increased.

Figure 20 Percentage of overweight and obese given lifestyle advice, by age and sex

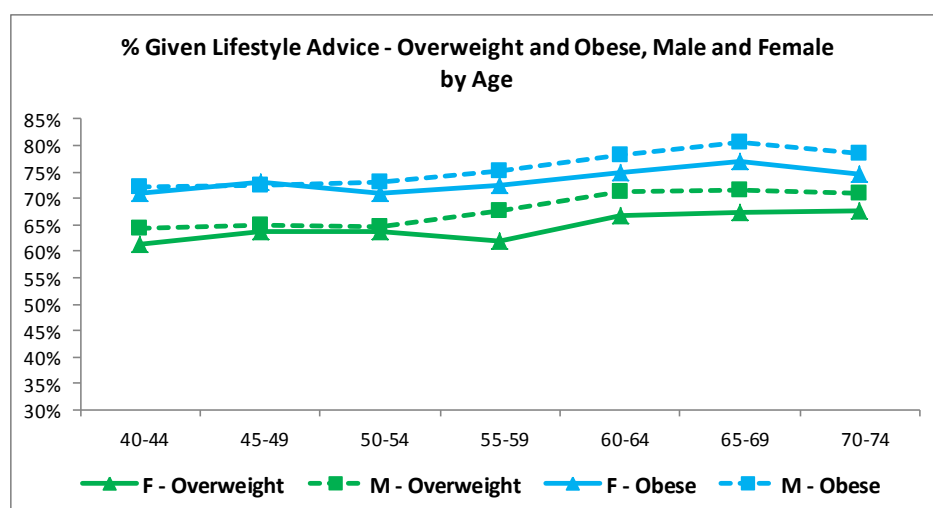
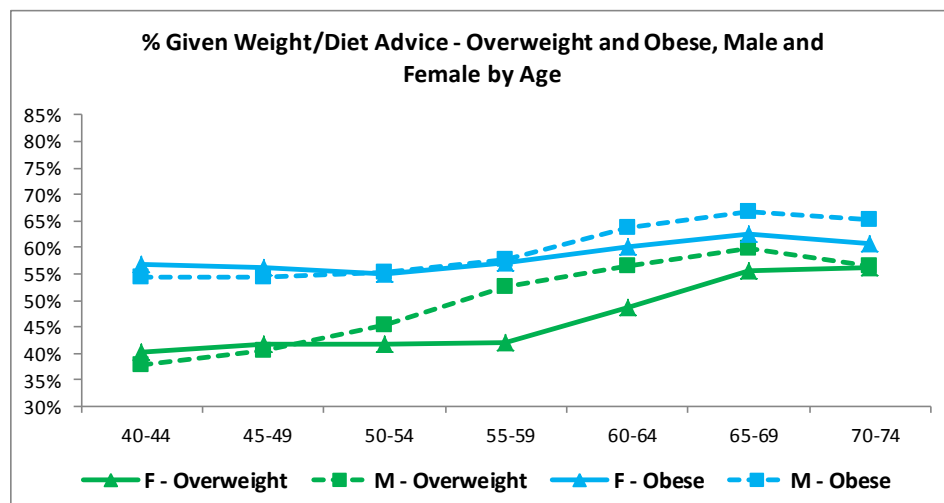


Figure 21 Percentage of overweight and obese given weight/diet advice, by age and sex



#### 4.1.2.2 Referred to weight management services: age and gender

Of the total assessed as having excess weight (BMI 25+), 4804 (8%) were recorded as being offered a referral to weight management services, however, 77% (3676) declined the referral.

Of the 1128 recorded as being referred:-

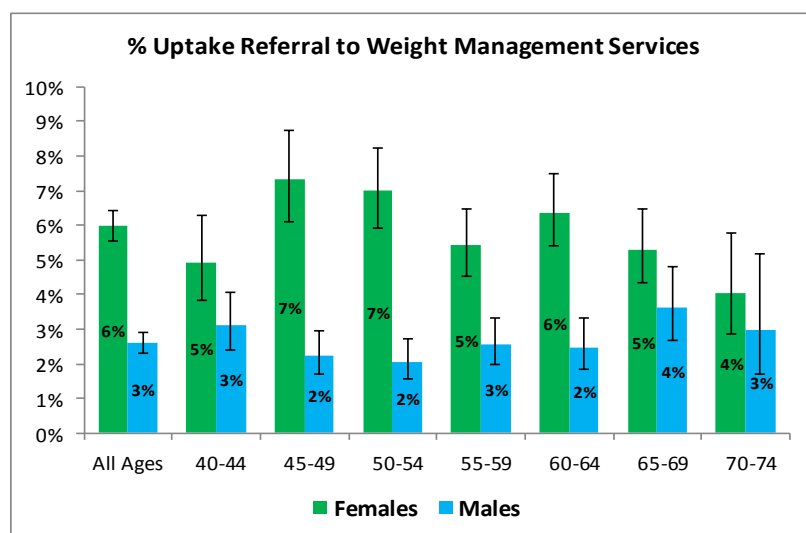
- 85% (962) were obese;
- 15% (166) were overweight.

This equates to only:-

- 4% of total assessed obese;
- <1% of total assessed overweight

A significantly higher proportion of obese women took up a referral to services compared to men (6% to 3%). In women, the youngest and oldest age groups had the lowest percentage uptake but it remained even across men (Figure 22).

Figure 22 Percentage uptake of referral to weight management services, by age and sex



#### 4.1.2.3 Advice given: deprivation

The percentage of those assessed as obese and given lifestyle or weight/diet advice was significantly lower than the average in Quintile 1 for both men and women (Table 17).

53% of obese women and 49% of obese men in Quintile 1 were recorded as having been given weight/diet advice compared to 60% and 58% in Quintile 5.

It is not known whether this is an artefact of poor recording in practices with the most deprived populations in early stages of the programme, but if this is a true reflection of practice there appears to be inequity in giving advice for those in deprived areas.

#### 4.1.2.4 Referred to weight management services: deprivation

Although there were no significant differences in the uptake of referral to weight management services by quintile, the percentage was lower in the most deprived compared to the least deprived when split by gender.

For an equitable approach, referral uptake would be expected to be at least equal if not higher in the most deprived quintiles whereas:-

- 107 women (5.7%, 4.8-6.9) in Quintile 1 took up a referral compared to 98 women (7.2%, 5.9-8.7) in Quintile 5;
- 44 men (2.8%, 2.1-3.7) compared to 46 men (2.8%, 2.1-3.7) in Quintile 1 and 5 respectively.

**Table 7 Percentages given advice and referred, by deprivation**

	Lifestyle Advice		Weight/Diet Advice		Weight Referral		
	% of Assessed Overweight	% of Assessed Obese	% of Assessed Overweight	% of Assessed Obese	Weight Referral - Obese	% of Assessed Overweight	% of Assessed Obese
Total	66.4%	74.2%	46.9%	56.7%	962	0.4%	4.2%
Deprivation Quintile 1	65.5%	70.5% ▼	45.4%	51.1% ▼	151	0.6%	4.4%
Deprivation Quintile 2	67.6%	74.6%	48.3%	55.6%	228	0.4%	4.3%
Deprivation Quintile 3	68.2%	76.1% ▲	49.5%	59.6% ▲	228	0.4%	4.1%
Deprivation Quintile 4	64.6%	73.4%	45.3%	57.4%	201	0.3%	3.9%
Deprivation Quintile 5	65.3%	75.0%	46.2%	58.8%	144	0.4%	4.7%
F Quintile 1	64.2%	70.4% ▼	42.5%	52.5% ▼	107	0.9%	5.7%
F Quintile 2	65.7%	73.6%	44.3%	55.5%	158	0.6%	5.9%
F Quintile 3	67.0%	75.3%	45.8%	60.9% ▲	160	0.7%	6.0%
F Quintile 4	62.6%	72.5%	41.4%	58.4%	132	0.4%	5.6%
F Quintile 5	64.4%	73.9%	43.9%	60.0%	98	0.7%	7.2%
M Quintile 1	66.7%	70.6% ▼	47.8%	49.4% ▼	44	0.4%	2.8%
M Quintile 2	69.0%	75.5%	51.4%	55.8%	70	0.3%	2.7%
M Quintile 3	69.0%	76.9%	52.1%	58.4%	68	0.2%	2.4%
M Quintile 4	66.0%	74.1%	48.0%	56.6%	69	0.2%	2.5%
M Quintile 5	65.8%	75.8%	47.8%	57.8%	46	0.3%	2.8%

Overweight = BMI 25+ minus those recorded as obese Obese = BMI 30+/27.5+ in Asian groups

## 4.2 Excess weight – children

The proportion of children aged 10-11 (Y6) in Derbyshire recorded as overweight or obese under the National Child Measurement programme is **significantly lower than for both England and East Midlands**. The trend is downwards, although the year on year change is not significant. The proportion in Derby is higher than for England and significantly higher than for East Midlands. Both Derby and Derbyshire are mid-range for their peer groups.

The proportion of children aged 10-11 recorded as overweight or obese at district level is significantly lower than for England in Amber Valley, Dales (lowest) and High Peak; Dales has a significantly lower proportion than East Midlands.

The proportion of obese children in Y6 is significantly lower than for England and East Midlands in Dales (lowest), High Peak and significantly lower than for England in North East. No district has a proportion significantly higher than for England or East Midlands.

## 4.3 Physically inactivity - adults

**The percentage of adults in Derbyshire who are physically inactive is higher than that for England and East Midlands, but not significantly so**, the proportion in Derby is similar to that for England and East Midlands.

Derbyshire is low compared to its peer group, while Derby is middling. Bolsover has a higher rate of inactivity than England; Dales has a lower rate. Bolsover and Chesterfield have higher rates of inactivity than East Midlands; Dales and South have lower rates.

## 5 INDICATORS OF RISK FACTORS FOR LIVER DISEASE: HEPATITIS

### 5.1 Hepatitis B

#### 5.1.1 Hepatitis B: population vaccination coverage at 2 years

The Derbyshire rate had risen to over 64% in 2012/13 (rates for subsequent years have been suppressed for disclosure control owing to the small numbers involved), which appears low compared with other upper tier local authorities in the region and with its peer group. The Derby rate has risen to 100%.

#### 5.1.2 Hepatitis B: Vaccination of drug users

The percentage of people in structured drug treatment who complete a course of vaccinations is higher than for both England and East Midlands. The Derby rate is significantly higher than for both. The rates for both are at the top end of their peer group.

### 5.2 Hepatitis C

#### 5.2.1 Prevalence of Hepatitis C

The following data is obtained from the Public Health England (2014) Commissioning template for estimated HCV prevalence and numbers eligible for treatment by Drug Action Team Area. It should be noted that the estimates provided by this methodology are based on assumptions about the distribution of HCV prevalence at local level. The estimates presented below must therefore be interpreted with caution, but do provide the best available current estimates for the local populations of Derby City and Derbyshire County.

**Table 8 Estimated Hepatitis C prevalence**

Population Group	Possible population infected with Hep C	
	Derby City	Derbyshire County
Estimated current injecting drug users	614 (0.4%)	431 (0.2%)
Estimated previous injecting drug users	283 (0.2%)	835 (0.24%)
Asian/Asian British – Pakistan (15yrs+)	222 (0.02-0.04%)	329 (0.0004-0.0008%)
White other	89 (0.0004-0.0008%)	16 (0.02-0.04%)
Asian/Asian British – Indian (15yrs+)	26 (0.003-0.005%)	10 (0.003-0.005%)
Asian/Asian British – Bangladeshi (15yrs+)	2 (0.003-0.006%)	1 (0.003-0.006%)
<b>Total</b>	<b>1237</b>	<b>1622</b>

**Table 9 Hepatitis C predicted burden of disease**

RNA positive (69% of total prevalence)	Estimate proportion of disease 2013*				Predicted proportion of disease 2023**			
	Derby City		Derbyshire County		Derby City		Derbyshire County	
Mild	519	60.8%	680	60.8%	344	40.3%	450	40.3%
Moderate	282	33.1%	370	33.1%	236	27.7%	310	27.7%
Cirrhotic	38	4.5%	50	4.5%	38	4.4%	49	4.4%
End stage	14	1.6%	18	1.6%	15	1.7%	19	1.7%
Died (all causes)					141	16.5%	184	16.5%
Sustained virological response					80	9.4%	105	9.4%

\*Based on updated burden model used in the Hepatitis C in the UK: 2013 report,

\*\*Based on updated burden model used in the Hepatitis C in the UK: 2013 report. Expected proportions in each disease state of those infected in 2013, where approximately 3% of chronic infections receive treatment annually, pegylated interferon + ribavirin, and direct acting antivirals Boceprevir and Teleprevir for those with genotype 1.



**Table 10 Hepatitis C Derby City population requiring treatment**

Requiring treatment	Derby City		Derbyshire County	
	Number	%	Number	%
Total Hep C population	1237		1622	
Number already diagnosed	512	41.4% of total Hep C population	671	41.4% of total Hep C population
Number already treated	230*	18.6% of total Hep C population	302*	18.6% of total Hep C population
Number cleared of infection	138	60% of treated population	181	60% of treated population
Number untreatable	51		67	
<b>Diagnosed and untreated</b>	<b>323</b>		<b>423</b>	

\*Based on estimated numbers treated 2006-2012 using sales/dispensing data

### 5.2.2 Hepatitis C: testing of drug users

The percentage of people in structured drug treatment receiving a hepatitis C test is lower than for both England and East Midlands in both Derby and Derbyshire, but mid-range for their peer groups.

State of Liver Health in Derbyshire

Category	Time Period	Persons (P)/ Male (M)/ Female (F)	Indicator	England	East Midlands	Derby	Derbyshire	Amber Valley	Bolsover	Chesterfield	Derbyshire Dales	Erewash	High Peak	North East Derbyshire	South Derbyshire	Erewash CCG	Hardwick CCG	North Derbyshire CCG	Southern CCG
All Liver Disease	2012/13	M	Hospital admission rate due to liver disease	142.8	136.8	171.4	119.0												
All Liver Disease	2012/13	F	Hospital admission rate due to liver disease	85.1	86.0	99.8	78.0												
All Liver Disease	2012/13	P	Hospital admission rate due to liver disease	113.0	110.9	134.8	98.1												
All Liver Disease	2011 - 13 (2013 CCG)	M	Under 75 mortality rate from liver disease	23.6 ▽	22.9 ▽	31.9 ▲	20.5 ▲	20.3 ▲	-	30.1 ▽	-	20.2 ▲	-	18.2 ▽	22.2 ·	20.3 ▲	9.2 ▽	20.3 ▲	21.8 ▲
All Liver Disease	2011 - 13 (2013 CCG)	F	Under 75 mortality rate from liver disease	12.5 ▽	12.5 ▲	14.8 ▲	11.9 ▲	14.9 ·	-	-	-	-	-	-	-	19.6 ▲	8.5 ▽	8.8 ▽	14.1 ▲
All Liver Disease	2011 - 13 (2013 CCG)	P	Under 75 mortality rate from liver disease	17.9 ▽	17.6 ▲	23.2 ▲	16.2 ▲	17.6 ▲	16.3 ▽	20.0 ▽	11.3 ·	17.9 ▲	13.2 ▲	14.7 ▲	17.1 ▲	19.9 ▲	8.8 ▽	14.6 =	17.9 ▲
All Liver Disease	2011 - 13	M	Under 75 mortality rate from liver disease considered preventable	21.1 ▽	20.7 ▽	28.4 ▽	18.9 ▲	18.7 ▲	-	26.4 ▽	-	19.005 ·	-	16.26 ▲	20.8 ·				
All Liver Disease	2011 - 13	F	Under 75 mortality rate from liver disease considered preventable	10.5 ▽	10.5 ▲	13.0 ▲	10.2 ▲	-	-	-	-	-	-	-	-				
All Liver Disease	2011 - 13	P	Under 75 mortality rate from liver disease considered preventable	15.7 ▽	15.5 =	20.6 ▽	14.5 ▲	15.9 ▲	14.0 ▽	17.5 ▽	-	16.696 ▲	12.4 ▲	12.421 ▲	15.2 ▲				
All Liver Disease	2013/14	P	Cumulative % of the eligible population aged 40-74 offered an NHS Health Check	18.4	18.5	20.9	19.6												
All Liver Disease	2013/15	P	Cumulative % of the eligible population aged 40-74 offered an NHS Health Check who	49.0	60.0	49.5	56.7												
All Liver Disease	2013/16	P	Cumulative % of the eligible population aged 40-74 who received an NHS Health check	9.0	11.1	10.3	11.1												
Alcohol	2013/14	M	Alcohol specific hospital admissions	515.1 ▲	427.8 ▲	605.7 ▲	479.6 ▲	413.1 ▲	457.9 ▲	693.9 ▲	368.4 ▲	523.4 ▲	604.8 ▲	425.4 ▲	333.0 ▲	565.93 ▲	457.53 ▲	552.41 ▲	469.35 ▲
Alcohol	2013/14	F	Alcohol specific hospital admissions	241.3 ▲	213.5 ▲	301.1 ▲	367.7 ▲	220.87 ▲	285.7 ▲	367.2 ▲	230.9 ▲	226.4 ▲	310.5 ▲	284.7 ▲	170.4 ▲	236.38 ▲	315.51 ▲	303.74 ▲	242.92 ▲
Alcohol	2013/14	P	Alcohol specific hospital admissions	373.8 ▲	317.9 ▲	449.2 ▲	259.1 ▲	315.7 ▲	371.3 ▲	528.3 ▲	298.5 ▲	371.9 ▲	455.6 ▲	353.5 ▲	249.4 ▲	397.55 ▲	385.62 ▲	426.18 ▲	353.84 ▲
Alcohol	2011 - 13	M	Alcohol specific mortality	16.6 ▽	16.3 ▲	29.1 ▲	14.0 ▽	14.9 ▲	14.1 ▽	17.6 ▽	10.3 ▲	16.7 ▲	11.3 ▽	9.7 ▽	16.4 ▲	17.5 ▲	12.84 ▽	13.37 ▽	20.88 ▲
Alcohol	2011 - 13	F	Alcohol specific mortality	7.5 ▲	7.4 ▲	10.0 ▽	7.8 ▲	6.8 ▲	6.7 ▽	9.8 ▽	4.4 ▽	13.2 ▲	9.0 ▲	5.6 ▲	5.6 ▽	14.09 ▲	6.49 ▽	7.2 ▲	7.91 ▲
Alcohol	2011 - 13	P	Alcohol specific mortality	11.9 ▽	11.7 ▲	19.5 ▲	10.8 ▽	10.8 ▲	10.4 ▽	13.7 ▽	7.3 ▲	14.9 ▲	10.1 ▲	7.7 ▽	10.9 ▽	15.64 ▲	9.65 ▽	10.25 ▽	14.34 ▲
Alcohol	2011 - 13	M	Mortality from chronic liver disease	15.5 ▽	15.4 ▽	24.6 ▽	14.0 ▲	13.0 ▲	14.5 ▽	15.6 ▲	11.0 ▲	17.1 ▲	13.4 ▲	11.59 ▽	15.9 ▲	16.36 ▲	14.32 ▽	13.25 ▲	18.56 ▲
Alcohol	2011 - 13	F	Mortality from chronic liver disease	8.2 ▽	8.2 ▲	12.2 ▲	8.7 ▲	9.2 ▲	5.9 ▽	7.8 ▽	5.4 ▽	13.2 ▲	9.7 ▲	7.75 ▲	8.9 ▲	13.97 ▲	7.19 ▽	7.35 ▽	10.16 ▲
Alcohol	2011 - 13	P	Mortality from chronic liver disease	11.7 ▽	11.7 ▲	18.3 ▲	11.3 ▲	11.1 ▲	10.2 ▽	11.4 ▽	8.2 ▽	15.01 ▲	11.4 ▲	9.81 ▽	12.4 ▲	14.98 ▲	10.77 ▽	10.2 ▽	14.32 ▲
Alcohol	2013/14	M	Admission episodes for alcohol-related alcoholic liver disease condition (Broad)	147.1 ▲	114.1 ▽	164.2 ▲	107.5 ▽	80.4 ▲	63.0 ▽	150.5 ▽	63.6 ▽	170.5 ▲	146.6 ▲	80.3 ▽	88.6 ▽	193.4 ▲	79.8 ▽	110.0 ▽	114.5 ▲
Alcohol	2013/14	F	Admission episodes for alcohol-related alcoholic liver disease condition (Broad)	65.8 ▲	54.8 ▲	65.6 ▲	65.2 ▲	46.7 ▲	106.4 ▲	66.1 ▲	27.2 ▽	100.7 ▲	41.8 ▽	90.3 ▲	48.5 ▲	84.2 ▲	129.8 ▲	49.0 ▲	59.0 ▲
Alcohol	2013/14	P	Admission episodes for alcohol-related alcoholic liver disease condition (Broad)	105.3 ▲	83.8 ▲	113.3 ▲	85.9 ▲	63.2 ▲	85.2 ▲	108.0 ▽	44.6 ▽	134.6 ▲	93.4 ▲	85.3 ▲	67.0 ▽	137.4 ▲	105.2 ▲	79.0 ▽	85.9 ▲

### State of Liver Health in Derbyshire

Category	Time Period	Persons (P)/ Male (M)/ Female (F)	Indicator	England	East Midlands	Derby	Derbyshire	Amber Valley	Bolsover	Chesterfield	Derbyshire Dales	Erewash	High Peak	North East Derbyshire	South Derbyshire	Erewash CCG	Hardwick CCG	North Derbyshire CCG	Southern CCG
Alcohol	2011 - 13	M	Under 75 mortality rate from alcoholic liver disease	11.8 ▽	11.8 ▽	20.5 ▲	10.0 ▽												
Alcohol	2011 - 13	F	Under 75 mortality rate from alcoholic liver disease	5.9 ▽	5.9 ▲	8.4 ▽	6.0 ▲												
Alcohol	2011 - 13	P	Under 75 mortality rate from alcoholic liver disease	8.7 ▽	8.8 ▽	14.4 ▽	8.0 ▲												
Hepatitis	2011/12	P	People who inject drugs	2.49	2.6	4.9	2.7												
Hepatitis B	2013/14	P	Population vaccination coverage (2 years old)			100.0	64.1 *												
Hepatitis B	2012/13	P	Persons in structured drug treatment - Percentage completing a course of hepatitis B vaccination	17.9	18.6	27.4	27.1												
Hepatitis B	2012/13	P	Hospital admission rate for hepatitis B related end-stage liver	0.96	0.48														
Hepatitis B	2011 - 13	P	Under 75 mortality rate from hepatitis B related end-stage liver	0.15 ▽	0.12 ▲	0.1 ▽	0.0 ▽												
Hepatitis C	2012/13	P	Persons who inject drugs - Percentage who have received a hepatitis C test	70.3	77.1	56.3	66.5												
Hepatitis C	2012/13	P	Hospital admission rate for hepatitis C related end-stage liver	3.5	2.1	5.6	1.7												
Hepatitis C	2011 - 13	P	Under 75 mortality rate from hepatitis C related end-stage liver	0.59 ▲	0.59 ▲	0.58 ▲	0.42 ▲												
Obesity	2012	P	Excess Weight in Adults	63.8	65.6	64.1	66.9	69.0	72.5	67.7	62.5	69.2	57.6	67.2	68.4				
Obesity	2013/14	P	Excess weight in 10-11 year olds	33.5 ▲	32.2 ▽	34.6 ▲	31.0 ▽	30.5 ▽	34.4 ▲	32.7 ▲	25.9 ▽	32.2 ▽	29.9 ▽	31.0 ▲	31.2 ▽				
Obesity	2013/14	P	Year 6: Prevalence of obesity	19.1 ▲	18.1 ▽			17.3 =	18.3 ▽	18.2 ▽	14.1 ▽	18.4 ▽	14.7 ▽	16.7 ▲	18.0 ▽				
Obesity	2013	P	Percentage of inactive adults	28.3 ▽	28.6 ▽	28.6 ▲	29.7 ▲	29.4 ▲	36.0 ▲	32.9 ▲	24.5 ▲	29.9 ▲	28.8 ▲	30.9 ▲	24.7 ▽				
Obesity	2012/13	P	Hospital admission rate for non-alcoholic fatty liver disease (NAFLD)	2.9	3.6	7.2	4.4												
Obesity	2011 - 13	P	Under 75 mortality rate from non alcoholic liver disease (NAFLD)	0.67 ▲	.78 ▲	0.72 ▲	0.75 ▲												

Rates are per 100,000 population except where otherwise described.

Compared to England:

Better	Similar	Worse
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Compared to the previous reporting period:

Significant ▲	Increase ▲	Same =	Decrease ▽	Significant ▽
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## 6 Appendix A – ICD 10 Codes

Category	ICD 10 codes	Description
All liver disease	B15-B19 C22 I81 I85 K70-K77 T864	Viral Hepatitis Malignant neoplasm of liver and intrahepatic bile ducts Portal vein thrombosis Oesophageal varices Diseases of liver Liver transplant failure and rejection
Chronic liver disease	K70 K73 K74	Alcoholic liver disease Chronic hepatitis, not elsewhere classified Fibrosis and cirrhosis of liver
Alcoholic liver disease	K70	Alcoholic liver disease
NAFLD	K760	Non-alcoholic fatty liver disease

## 7 Appendix B – Peer Groups

### [CIPFA Nearest Neighbours](#)

The top 15 most similar local authorities selected from Counties for Derbyshire and Unitary Authorities for Derby.

<b>Derby</b>	<b>Derbyshire</b>
Plymouth	North Yorkshire
Halton	Northamptonshire
Swindon	Warwickshire
Blackburn with Darwen	Somerset
Telford and Wrekin	Lancashire
Medway	Nottinghamshire
Warrington	Gloucestershire
Stockton-on-Tees	Norfolk
Darlington	Kent
Southend-on-Sea	Staffordshire
Middlesbrough	Cumbria
Bedford	Worcestershire
Peterborough	Essex
Stoke-on-Trent	Leicestershire
Thurrock	Lincolnshire