



# NorthWest Public Health Observatory

## ALCOHOL

### SOME SOBERING STATISTICS FROM THE NWPHO

This paper is an extract from a wider report on alcohol, tobacco and illegal drug use in the North West to be published in the new year through the North West Public Health Observatory. The extract is posted here for information purposes over the Christmas period. We would appreciate any comments on the content and would welcome any additional information that readers believe should be included in the report.

# ALCOHOL

## SOME SOBERING STATISTICS FROM THE NWPHO

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# 1. PROBLEMS ASSOCIATED WITH ALCOHOL

## 1.1 INTRODUCTION

Alcoholic beverages consist principally of water and ethyl alcohol, a substance produced from the fermentation of various plants. Despite its apparent purity, alcohol is a depressant with anaesthetic effects, which slows down the body's nervous system and hinders physical and mental responses. Table 1.1 shows the progression of alcohol's effects on the mind and body.

*Table 1.1: Acute effects of alcohol<sup>1,2</sup>*

| <b>Blood alcohol level<br/>(mg/100ml)<sup>i</sup></b> | <b>EFFECTS</b>   |
|---|--|
| 20  | Warmth and relaxation                                    |
| 40  | Mood and behaviour begin to alter, driving impaired      |
| 50  | Less control over behaviour and lowered judgement        |
| 80  | Legal upper limit for driving a motor vehicle            |
| 100   | Unsteadiness, impaired speech and emotional judgement    |
| 150   | Muscle incoordination, double vision, sluggish reactions |
| 200   | Nausea, depression, irritability                         |
| 300   | Gross intoxication, loss of sight/hearing, confusion     |
| 400   | Progressive stupor, 'passing out'                        |
| 500-800   | Coma, paralysis of respiratory centre, fatal outcome     |

There is much confusion as to the relative benefits and risks of alcohol. It is important that the evidence base that informs policy is balanced. Alcohol is for many people associated with relaxation and social interactions, both of which make an important contribution to our quality of life. It is also thought that moderate alcohol intake amongst the over 30s may have a protective effect on health, although this matter is still subject to debate<sup>3,4,5</sup>.

The contribution of alcohol misuse to ill health, however, almost certainly outweighs its contribution to health improvement. It is estimated that between 28,000 and 33,000 deaths a year in the UK are alcohol-related, and that it costs the NHS more than £164 million a year to treat alcohol-related problems<sup>6</sup>. Despite this, alcohol is available to buy and consume in large quantities, with no law regulating the volume consumed by individuals over the age of five.

<sup>i</sup> The blood alcohol level per unit of alcohol will differ according to a range of factors, including sex, body weight, previous exposure to alcohol. A unit would normally contain a 8grams of pure alcohol

Alcohol dependence and excessive alcohol consumption can lead to a range of physical, psychological, and social problems. Whilst problematic alcohol use has a significant impact on the health of individual drinkers, the wider consequences of alcohol misuse for society are substantial, albeit difficult to measure.

## 1.2 HEALTH IMPACTS OF LONG TERM ALCOHOL MISUSE

Long term abuse of alcohol creates severe health risks to individuals and may contribute to many cases of illness and premature death not specified as alcohol-related. Figure 1.1 below shows some of the long-term health risks associated with the misuse of alcohol.

*Figure 1.1: Long term health risks associated with alcohol<sup>6,7,8</sup>*

| LONG TERM HEALTH IMPACTS OF ALCOHOL MISUSE  |
|---|
| <ul style="list-style-type: none"><li>• Liver disorders: hepatitis, cirrhosis of the liver, cancer of the liver (most alcohol-specific fatalities recorded result from chronic liver disease and cirrhosis<sup>i</sup>)</li><li>• Gastrointestinal problems: pancreatitis; cancer of the oesophagus; digestive problems; gastritis</li><li>• Nerve and muscle damage: weakness; burning sensations in hands/feet; paralysis</li><li>• Circulatory problems: high blood pressure (hypertension), stroke</li><li>• Cancer: cancer of the voicebox [larynx]), the throat (treble the risk) and the gullet (double the risk) as well as the oesophagus, and possibly breast cancer. In total, around 3% of cancers are attributable to alcohol.</li><li>• Reproductive problems: impotence and infertility (in men); disruption of menstrual cycle (in women)</li><li>• Malnutrition: obesity; weight loss through under-eating; disrupted metabolism</li><li>• Respiratory problems: fractured ribs, pneumonia; low blood sugar</li><li>• Mental health: suicide (30% alcohol-linked); depression; psychiatric disorders (30% of alcohol-dependents)</li></ul> |

Whilst heavy drinkers have been found to visit their GPs twice as often as light drinkers<sup>9</sup> consumption of alcohol in conjunction with medications can produce adverse side effects and can diminish or exaggerate a drug's effects.

Mental health can be affected by alcohol, and individuals with mental health problems may be more vulnerable to alcohol abuse. Those who are depressed or suffering from anxiety are more likely to drink, and alcohol is likely to exacerbate feelings of

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<sup>i</sup> NB More publicans than any other occupation die from cirrhosis (1017 per 100, 000)

depression<sup>7</sup>. An Office for Population Censuses and Surveys study of psychiatric morbidity found that 19% of male heavy drinkers and 30% of female heavy drinkers had a neurotic disorder<sup>10</sup>. Suicide is also strongly linked to alcohol, with around 65% of suicide attempts being associated with excessive alcohol consumption<sup>11</sup>.

## **1.3 ALCOHOL AND SPECIFIC POPULATIONS**

### **1.3.1 ALCOHOL AND GENDER**

In the UK, men are consistently more likely to suffer from alcohol-related problems, largely showing that more men consume alcohol than women. However, female consumption rates are increasing - 14% of females over the age of 16 reported drinking above recommended weekly limits in 1996 compared to 10% in 1986<sup>12</sup>. In 1998, 88% of women over the age of 16 reported alcohol consumption at some level compared to 92% of men<sup>13</sup>.

Females have a lower tolerance to alcohol because:

- water makes up less female body weight than male body weight and women are therefore less able to dilute alcohol<sup>14</sup>;
- the female body is less efficient at metabolising alcohol as it has less of the alcohol dehydrogenase enzyme which aids this function in the stomach<sup>15</sup>.

Therefore, a male and female of similar age, weight and build are likely to suffer different effects after drinking the same volume of alcohol.

Women may suffer adverse reactions to alcohol, in particular a lower tolerance, prior to menstruation and liver disease as a consequence of alcohol misuse may interfere with hormonal contraceptives. A pregnant woman who drinks more than ten units per week can double her risk of miscarrying<sup>15</sup>. Between 2% and 25% of women who drink 56+ units per week in pregnancy will give birth to babies with Foetal Alcohol Syndrome<sup>16</sup>.

### **1.3.2 ALCOHOL AND AGE**

Different age groups demonstrate different patterns of alcohol use. In particular the 16-25 age group drink most often, with 50% of males and 41% of females consuming above recommended daily limits<sup>17</sup>. While the health impacts of excessive alcohol consumption for young people are not fully understood, it is clear that alcohol intake amongst 11 to 16 year olds is increasing. According to the Department of Health, 27% of 11 to 16 year olds had drunk in the week prior to survey in 1996 compared to 21% in 1992<sup>12</sup>.

Although drinking rates tend to decline with age, the proportion of older persons drinking above sensible limits has also increased over the last decade. The General Household Survey (1998) found that 16% of males and 6% of females over the age of

65 consumed above recommended weekly limits in 1998-1999<sup>18</sup>. Whilst many older drinkers will be 'lifelong drinkers', some may begin to abuse alcohol in later life to relieve age-related problems such as sleeplessness, retirement or bereavement<sup>19</sup>.

Elderly people have a significantly lower tolerance to alcohol due to natural changes associated with the ageing process (see Figure 1.2). Therefore the impacts of alcohol misuse are more severe for older people. Accidents are a principal cause of death among older people, and alcohol can contribute to mortality and morbidity through its deteriorating effect on stability and judgement. Alcohol is also associated with mental illness, and can contribute to dementia (10% of elderly sufferers have alcohol-related brain damage) as well as depression<sup>19</sup>. Furthermore, older people consume more prescribed medicines, the effects of which alcohol can nullify or exacerbate.

*Figure 1.2: Factors that make older people vulnerable to alcohol problems<sup>20,19</sup>*

### **ALCOHOL AND OLDER PEOPLE**

- Elderly people have a lower body water content to fat ratio causing blood alcohol levels to be more highly concentrated;
- a weakened liver/kidney function slows down the metabolism of alcohol;
- hepatic blood flow decreases with age meaning alcohol will cause greater damage to the liver;
- alcohol has a greater effect on the brain due to its slowed response;
- general alcohol awareness tends to be lower amongst elderly people.

Older people could also regard a drink problem as a moral problem and may therefore conceal the symptoms and be reluctant to contact services. Many will live alone with minimum social contact and many will have no formal contact with professional carers. Moreover, elderly people may not be aware that services are available, or may have problems in physically accessing services. Alcohol abuse amongst the elderly may remain concealed with the signs being mistaken for 'age' problems. Misdiagnosis of alcohol-induced problems could cause severe difficulties for an elderly person with an alcohol problem if prescribed a drug that reacts badly with alcohol<sup>19</sup>.

## **1.4 ACCIDENTS**

A large number of people seek treatment from the health services as a result of alcohol-related accidents. Alcohol can contribute to accidents in two ways: it can contribute as a cause (e.g. falling over), and can also hinder inebriated people to cope in an accident. It is thought that alcohol is a contributory factor in between 20-30% of all accidents<sup>8</sup>. According to the HEA (1998), one in six people presenting at hospital accident and emergency departments require treatment for alcohol-related injuries or problems (increasing to 8 in 10 during peak times)<sup>21</sup>.

In terms of accidental deaths, around 40% of casualties from fires are thought to be alcohol-related<sup>22</sup>, as are approximately 30% of drownings (50% amongst 20-30 year

olds), and up to 35% of serious workplace accidents<sup>8</sup>. Drink driving causes many fatalities every year and is discussed in section 1.8.

## **1.5 WIDER IMPACTS OF ALCOHOL MISUSE**

The calculable medical consequences of alcohol misuse do not alone reflect the drug's true toll on health. Alcohol misuse can cause a range of social problems, not only for the individual concerned but also for society as a whole.

### **1.5.1 ALCOHOL AND THE FAMILY**

Children of heavy drinkers are at risk of physical and emotional neglect, abuse, and stress and are more likely to have their own alcohol problems in later life. Evidence indicates that parental alcohol misuse is the most important contributory factor in children entering Local Authority care and is associated with up to a third of child abuse cases<sup>23</sup>. It is estimated that alcohol is involved in between 30% and 60% of all child protection cases in the UK<sup>8</sup>.

Alcohol is a factor in up to 50% of cases of domestic violence<sup>22</sup> and it is thought that up to 70% of men who assault their partners are under the influence of alcohol when the assault takes place<sup>24</sup>. Marriages are twice as likely to end in divorce if one or both partners has an alcohol problem<sup>25</sup>.

### **1.5.2 ALCOHOL AND HOMELESSNESS**

Alcohol misuse is widespread amongst the homeless population, with individuals possibly becoming homeless as a result of an alcohol problem or turning to alcohol to obscure the problems created by their homelessness. The 1994 National Survey of psychiatric morbidity among homeless people in Britain found that 51% of people sleeping rough and using day centres, and 44% of people using night shelters, were dependent on alcohol<sup>26</sup>.

### **1.5.3 ALCOHOL AND SEXUAL ACTIVITY**

The use of alcohol in social interactions can have harmful consequences on the sexual health of users. People may use alcohol to lessen their inhibitions and facilitate communication with potential sexual partners, but whilst under the influence of alcohol people are also less likely to consider the risks of their actions. A study undertaken in Manchester found that young women were more likely to have unprotected sex whilst under the influence of alcohol despite being aware of the importance of condom use<sup>27</sup>. Unprotected sex could result in unwanted pregnancy and infection with sexually transmitted diseases or even HIV. Aside from alcohol use, a major issue that arose in the Manchester study was the embarrassment felt by all the young women surveyed regarding the use of condoms.

## 1.5.4 THE SOCIAL COSTS OF ALCOHOL

The financial burdens of alcohol misuse on both the public and the nation's industrial base are immense. Figure 1.3 shows a breakdown of the financial costs of alcohol on the various sectors within society.

*Figure 1.3: Social costs of alcohol misuse<sup>28</sup>*

| <b>The Social Costs of Alcohol Misuse at 1990 Prices</b>  |                 |
|---|-----------------|
| <b>The Social Costs to Industry</b>   | <b>£million</b> |
| Sickness and absence  | 964.37          |
| House work services   | 64.78           |
| Unemployment  | 222.23          |
| Premature deaths  | 870.76          |
| <b>Total</b>  | <b>2122.14</b>  |
| <hr/>   |                 |
| <b>Social Costs to the National Health Service</b>  |                 |
| Psychiatric hospitals, inpatient costs  | 26.51           |
| Non-psychiatric hospitals, inpatient costs  | 10.64           |
| Other alcohol-related inpatient costs   | 109.41          |
| General practice costs  | 2.79            |
| <b>Total</b>  | <b>149.35</b>   |
| <hr/>   |                 |
| <b>Societies Response to Alcohol Related Problems</b>   |                 |
| Expenditure by national alcohol bodies  | 0.44            |
| Research  | 0.80            |
| <b>Total</b>  | <b>1.24</b>     |
| <hr/>   |                 |
| <b>Social Costs of Material Damage</b>  |                 |
| Road traffic accidents (damage)   | 138.62          |
| <b>Total</b>  | <b>138.62</b>   |
| <hr/>   |                 |
| <b>Social Costs of Criminal Activities</b>  |                 |
| Police involvement in traffic offences<br>(excluding road traffic accidents)                      | 6.53            |
| Police involvement in road traffic offences<br>(including judiciary and insurance administration) | 19.36           |
| drink related court cases   | 24.18           |
| <b>Total</b>  | <b>50.07</b>    |
| <hr/>   |                 |
| <b>TOTAL</b> excluding unemployment and premature death   | 1368.43         |
| <hr/>   |                 |
| <b>TOTAL</b> including unemployment and premature death   | 2461.42         |
| <hr/>   |                 |

## 1.6 ALCOHOL AND THE WORKPLACE

It has been estimated that alcohol misuse costs British industry over £2,000 million a year<sup>28</sup> (see figure 1.3). In a 1994 survey, 90% of personnel directors from British organisations cited alcohol consumption as a problem within their workplace. Their major concerns included loss of productivity, absenteeism, safety, employee relations, poor behaviour and impacts on company image<sup>29</sup>. It is estimated that 8-14 million working days are lost annually due to alcohol-related problems<sup>30</sup>. With regard to safety, up to 25% of workplace accidents<sup>30</sup> and around 60% of fatal accidents at work<sup>22</sup> may be associated with alcohol.

There are some industries where alcohol misuse is more likely to occur due to availability or sociability of drugs or drink. A 1995 study that examined the links between occupation and cause of death demonstrated a correlation between certain professions and alcohol-related death. For example, pub landlords, medical doctors and seafarers are at greater risk of dying from cirrhosis of the liver, falls on stairs, and alcohol-related cancers<sup>31</sup>. Likewise, certain professionals are more exposed to the effects of alcohol misuse in others, such as doctors and social workers.

Apart from the personal risks for individuals, alcohol misuse at work creates risks for both fellow employees and the public through mistakes and accidents. The OPCS/HSE survey found that a large proportion of male bus and coach drivers were consuming over 50 units of alcohol per week, whilst construction workers were drinking the greatest amount of alcohol per week. Individuals employed in both of these areas have the potential to cause harm to the public<sup>31</sup>.

Conversely, alcohol misuse may be triggered through occupational stress (particularly high pressures jobs when employees do not have much personal control)<sup>32</sup>, or through basic availability of alcohol in the workplace, such as bar staff and pub landlords<sup>33</sup>.

## 1.7 ALCOHOL AND CRIME

Alcohol contributes considerably to the crime rate in the UK, not only through offences directly associated with alcohol, such as drink driving, but also through other crimes committed either under the influence of alcohol or as a result of an alcohol problem<sup>34</sup>. For example, a person with an alcohol problem may steal to supply or fund their habit, or a burglar may drink to boost self-confidence before committing a crime<sup>35</sup>. The BMA advised an All-Party Group of MPs that alcohol is an aspect in 60-70% of homicides, 75% of stabbings, 70% of beatings and 50% of domestic assaults and fights<sup>36</sup>. Conversely, it is also thought that a third of all murder victims are under the influence of alcohol at the time of death<sup>22</sup>.

A further link between alcohol and crime is the high proportion of offenders in prison and on remand who have alcohol problems. The All-Party Group on Alcohol Misuse (1995) found that 30% of individuals on probation in 1994 had severe alcohol problems and that 70% of these individuals reported this alcohol problem as being directly associated with their last offence. It was also found that 45% of remand

prisoners and 20% of sentenced prisoners had severe alcohol problems, with 7% of sentenced prisoners being alcohol-dependent<sup>36</sup>.

Aside from crimes committed as a result of alcohol misuse, HM Customs and Excise estimates that up to £220 million was lost in revenue in 1997 as a result of cross-channel alcohol smuggling<sup>37</sup>.

## **1.8 ALCOHOL-RELATED ROAD TRAFFIC ACCIDENTS**

Although there has been a considerable decline in alcohol-related road fatalities and injuries over the last two decades, drink-driving is still one of the greatest causes of death and injury in this country. The DETR estimates there were 550 deaths and over 16,000 injuries caused through drink driving in 1997<sup>38</sup>. It is thought that 20% of drivers killed on the roads have illegal blood alcohol levels (above 80mg/100ml), whilst drivers with blood alcohol levels of between 50mg to 80mg/100ml are 2 - 2.5 times more likely to be involved in an accident<sup>39</sup>. The Department of Health has estimated that 30% of pedestrians killed on the roads are over the legal driving limit<sup>40</sup>, and this figure is thought to rise to 75% between the hours of 10pm and 4am<sup>41</sup>.

Over half of the victims of drink driving are not themselves over the legal driving limit. In 1995 over 700 pedestrians were killed or seriously injured in drink driving accidents, as were almost 200 cyclists. Around 5% of the victims of drink driving are children, whilst 6% are elderly. The under 30s age group are most likely to be involved in an alcohol-related fatal road traffic accidents, whilst 9 in 10 drink-driving offenders are males<sup>42</sup>.

## **2. ALCOHOL CONSUMPTION IN THE UK**

### **2.1 UK TRENDS IN ALCOHOL CONSUMPTION**

People in the UK consume a lot of alcohol. In 1998 consumers spent almost £27 billion on alcohol in the UK - over £1 billion more in real terms than the same period in 1991. Unsurprisingly, sales of alcohol always peak in the quarter before the Christmas holiday season. Almost twice as much is spent on alcohol than fuel and power per capita in the UK<sup>43</sup>.

The Office for National Statistics estimated UK average weekly alcohol consumption at 16 units per week for men and 6 units per week for women in 1997<sup>18</sup>. The largest percentage of male heavy drinkers were living in England and Scotland, whilst the largest percentage of female heavy drinkers were living in Wales. For the purpose of consistency, however, this section of the report will mainly use data from the Department of Health's Health Survey for England 1998. In 1998, the Department of Health estimated the average weekly consumption of alcohol in England to be 18 units for men and 7.2 units for women. These figures have risen steadily for several years, with the respective figures being 16.9 and 6.2 units in 1995<sup>13</sup>. Furthermore, these levels camouflage much heavier drinking among certain populations. It is estimated that 31% of males and 18% of females are drinking in excess of recommended weekly units of alcohol recommended by medical bodies (21 for men and 14 for women), whereas in 1995 the figures were 29% and 14% respectively<sup>13</sup>. Alcohol consumption is particularly high amongst young people in the UK. In 1998, 42% of males and 28% of females in the 16-24 age group were drinking more than the recommended weekly maximum<sup>13</sup>. Young women today drink quantities far in excess of women in the same age group over the previous decade. According to the Department of Health, 39% of boys and 34% of girls aged between 8 and 15 have tried an alcoholic drink<sup>44</sup>, whilst one third of both boys and girls aged between 13 and 15 had drunk during the week before survey<sup>13</sup>.

### **2.2 WHO DRINKS MOST?**

General population surveys including the Health Survey for England and the General Household Survey provide some insight into which groups within the UK are most likely to engage in excessive drinking. Table 2.1 summarises the general characteristics of the heaviest and lightest alcohol consumers in the UK.

**Table 2.1 General characteristics of alcohol consumers in the UK<sup>13,18</sup>**

| <b>DRINK LEAST</b>   | <b>DRINK MOST ON A WEEKLY BASIS</b>                                   | <b>DRINK MOST IN ONE DAY'S DRINKING</b>                    |
|--|---|--|
| Females <sup>i</sup>   | Males   | Males  |
| Aged over 75 <sup>ii</sup>   | Aged 16-24 <sup>iii</sup>   | Aged 16-24   |
| Pakistani, Bangladeshi and Chinese <sup>iv</sup>                     | White/Irish   |  |
| <i>Married without dependent children/WIDOWED/DIVORCED/SEPARATED</i> |   | Single   |
| <i>Unemployed/EMPLOYED</i>   |   | <i>Employed/UNEMPLOYED</i>                                 |
| <i>Professional occupations</i><br>UNSKILLED OCCUPATIONS             | Managerial and Technical occupations                                  | <i>Unskilled occupations</i><br>PARTLY SKILLED OCCUPATIONS |
| Low earners  | High earners  | High earners/lowest earners <sup>v</sup>                   |
| From North Thames Region   | From <i>Northern &amp; Yorkshire Region</i> and the <b>NORTH WEST</b> | From Northern & Yorkshire Region and the <b>North West</b> |

*Text in Italics refers only to males and text in capital letters only to females*

<sup>i</sup> Figure 2.1 illustrates the gender differences in the consumption of alcohol

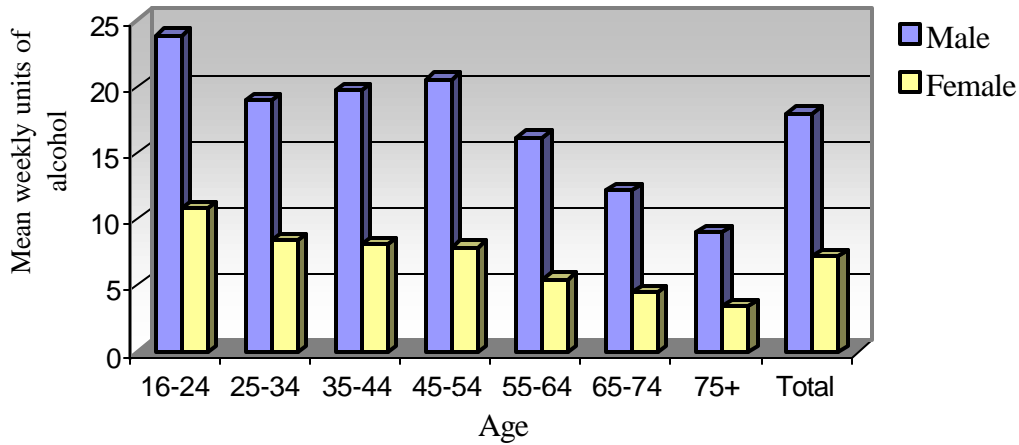
<sup>ii</sup> The over 75 age group are most likely to consume alcohol at some level on every day of the week, whilst the 16-24 age group, although consuming the highest quantities of alcohol, are least likely to be drinking 7 days a week (see figure 2.2)

<sup>iii</sup> The percentage of young people aged 16-24 drinking above recommended weekly limits has increased dramatically since 1993, with the percentage of women almost doubling (see figure 2.3)

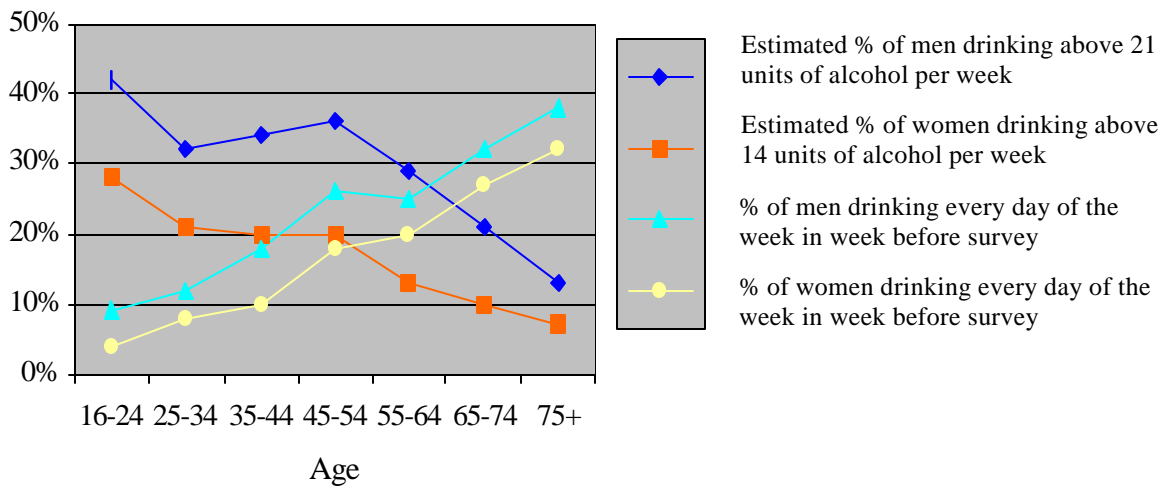
<sup>iv</sup> The 1999 Health Survey for England focused on differences in health status between different ethnic groups in the UK. It found that both males and females of Pakistani, Bangladeshi and Chinese origin drink less on average than other ethnic groups surveyed, and very few individuals from these populations drink above recommended limits. The greatest difference between genders is found within the Indian population where males are eight times more likely than women to drink in excess, whereas in other ethnic groups males are generally about twice as likely as women to drink heavily (see figure 2.4)

<sup>v</sup> Although the highest earning households have the greatest percentage drinking above recommended daily limits (3 units for women, 4 for men) in one day's drinking, the lowest earning households have a greater percentage of individuals consuming more than double recommended daily limits in one drinking session (see figure 2.5).

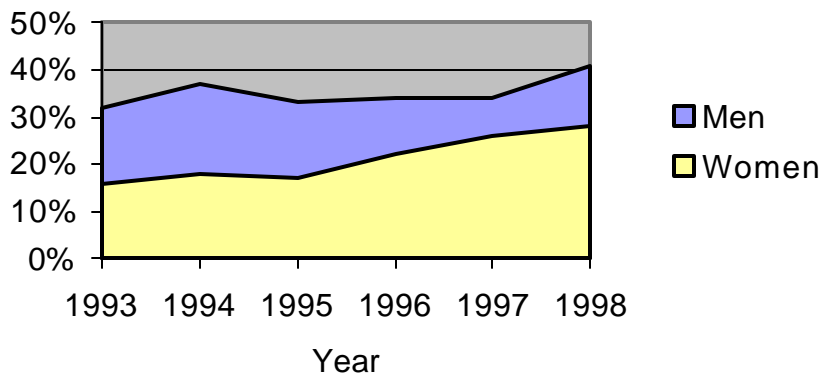
**Figure 2.1: Mean weekly units of alcohol consumed by gender and age, 1998<sup>13</sup>**



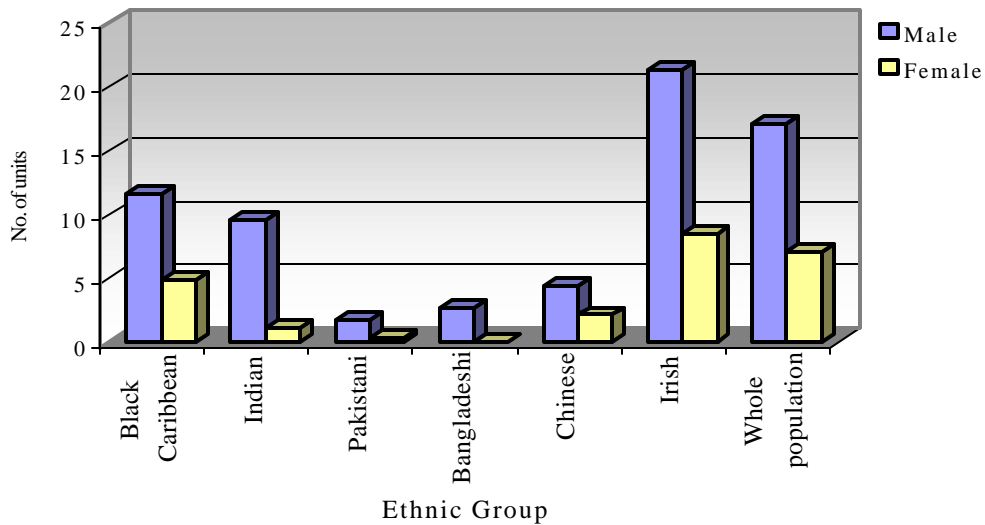
**Figure 2.2: Estimated Percentage of individuals aged 16 and over consuming 14/21 units of alcohol per week and percentage drinking alcohol on every day of the week preceding survey, by gender and age, 1998<sup>13</sup>**



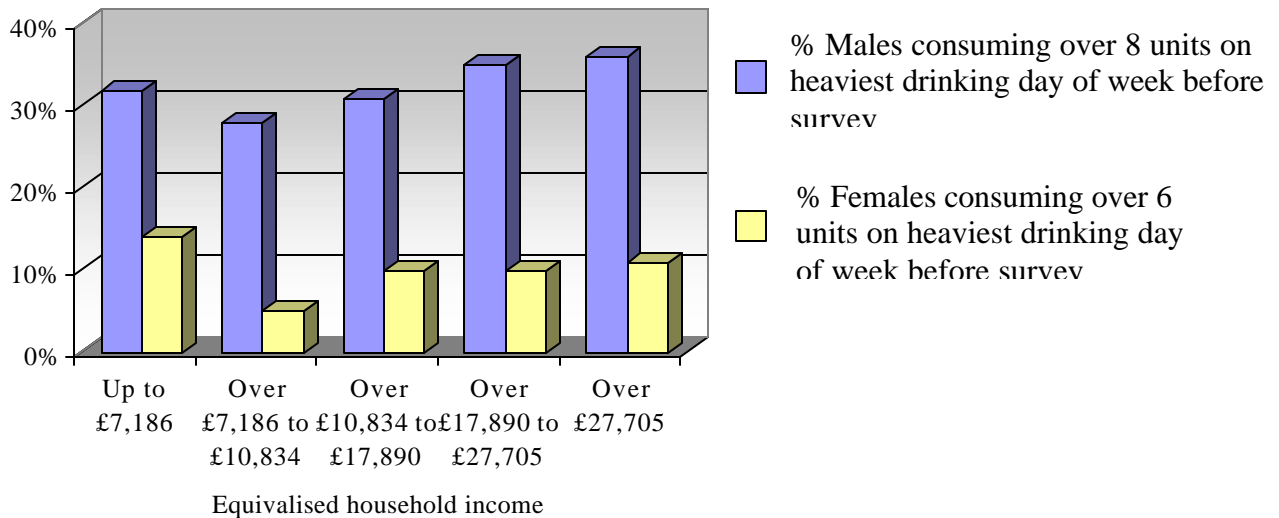
**Figure 2.3: Percentage of 16-24 year olds consuming above recommended weekly alcohol limits, by gender and year<sup>13</sup>**



**Figure 2.4: Average number of units consumed per week by different ethnic groups, males and females, 1999<sup>45</sup> (excluding white British)**



**Figure 2.5: Percentage of individuals consuming over 6/8 units of alcohol on heaviest drinking day of week preceding survey, by equivalised household income and gender, 1998<sup>13</sup>**

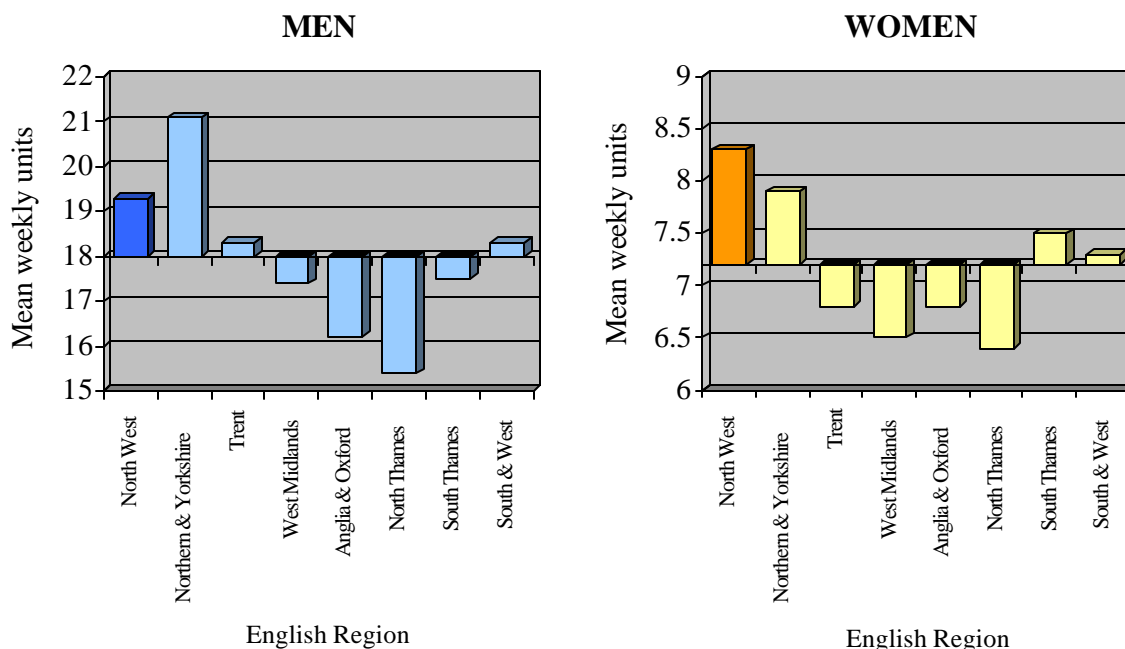


### 3. ALCOHOL CONSUMPTION IN THE NORTH WEST OF ENGLAND

#### 3.1 REGIONAL TRENDS IN ALCOHOL CONSUMPTION

Alcohol consumption in the North West is higher than the national average for both men and women<sup>13</sup>. Estimated mean weekly alcohol consumption for men in the North West (NHS Regional Office area) in 1998 was 19.3 units, higher than the English average of 18 units, and second only to Northern and Yorkshire Region (21.1 units). Estimated mean weekly alcohol consumption for women in the North West was 8.3, well above the English average of 7.2 and the highest in of all English regions (see figure 2.6).

*Figure 2.6: Average weekly units of alcohol consumed by region in comparison to the English average, male and female, 1998<sup>13</sup>*

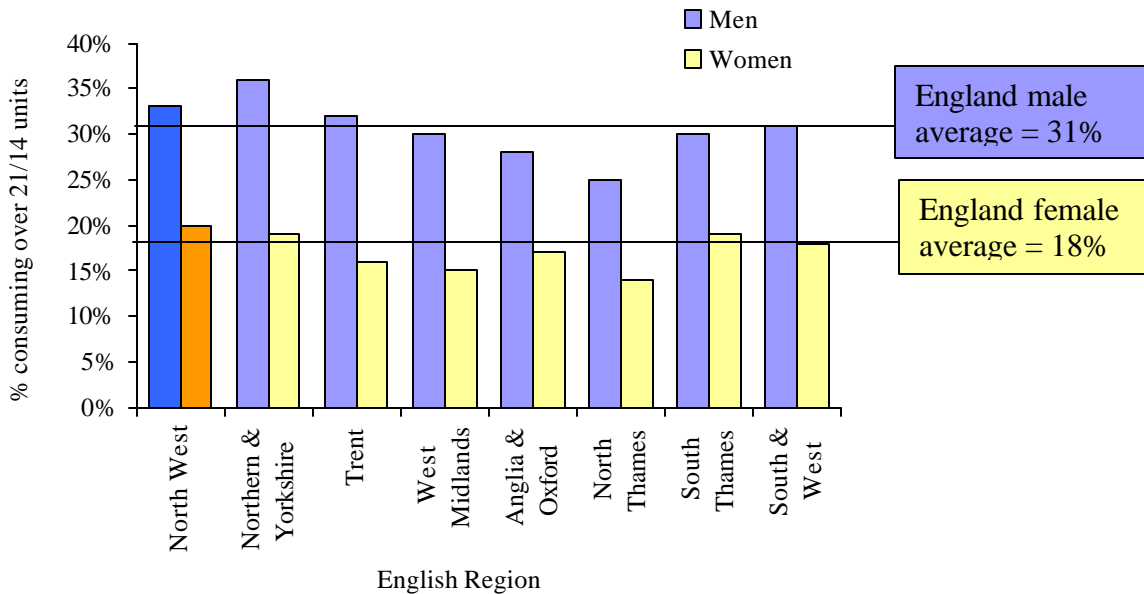


The proportion of drinkers who consume over recommended levels of alcohol in the North West is also higher than the national figure. In 1998 one third (33%) of men in the North West were drinking over 21 units of alcohol weekly, compared to the English average of 31%. One fifth (20%) of North West women were drinking more than 14 units per week, the highest regional percentage, compared to 18% countrywide<sup>13</sup> (see figure 2.7). These figures depend on the self-reporting of individuals, who may underestimate their own consumption. The real volume being consumed in any one week by individuals may be far greater.

The 1998 General Household Survey collected information relating to individuals' daily rates of alcohol use, in line with the new recommendation for men and women to drink no more than 3-4 and 2-3 units daily respectively, and in response to evidence of binge drinking in previous years. Results found that males and females in the

North West Region were more likely to exceed these limits than men and women in other parts of the country. An estimated 44% of North West men had consumed over 4 units on their heaviest drinking day in the week before survey, compared to a UK average of 38%. Of these drinkers, 59% had consumed over 8 units on this day. Men in Merseyside were slightly more likely to have exceeded daily limits than were men from other areas of the North West. One quarter of women from the North West were exceeding daily limits compared to 21% throughout the UK. Again women in Merseyside were more likely to exceed limits than women in other parts of the North West (see figure 2.8).

**Figure 2.7: Percentage of individuals consuming more than 21(male)/14(female) units of alcohol per week, by region and sex, 1998<sup>13</sup>**



**Figure 2.8: Percentage of individuals aged 16 and above consuming more than 3(female)/4(male) units of alcohol on heaviest drinking day in week before survey, by gender and region, 1998<sup>18</sup>**

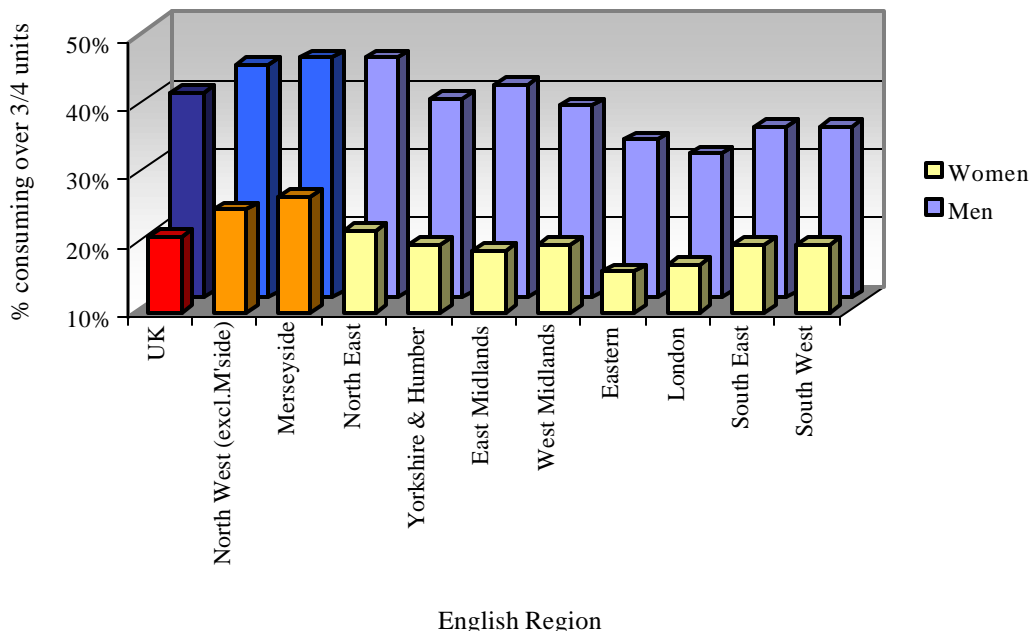


Table 2.2 shows the mean weekly units of alcohol consumed by males and the mean percentage of males consuming over 50 units of alcohol per week broken down by Health Authority (1994-1996). In all but five Health Authority areas, men are drinking more units per week than the English average of 17.4 units, although the percentages of men drinking over 50 units a week in half of all North West Health Authorities are lower than the English average of 7.1%. Men living in Manchester Health Authority area consume the greatest weekly units of alcohol and are also most likely to be consuming over 50 units of alcohol per week<sup>46</sup>. The high rates of alcohol consumption in the Manchester area are probably due to the high population of students and other young people residing in the city.

**Table 2.2: Male mean weekly alcohol consumption and mean percentage of males consuming over 50 units of alcohol per week by Health Authority<sup>46</sup>**

| Health Authority      | Mean weekly units of alcohol consumed by males | Mean percentage of males consuming over 50 units per week |
|-----------------------|--|---|
| Liverpool             | 18.2   | 6.4   |
| Manchester            | <b>24.1</b>                                    | <b>14.4</b>   |
| Morecambe Bay         | 20.2   | 10.7  |
| St Helens & Knowsley  | 16.7   | 6.9   |
| Salford & Trafford    | 21.6   | 12.2  |
| Sefton                | 18.0   | 8.0   |
| Stockport             | 18.2   | 4.3   |
| West Pennine          | 21.7   | 14.1  |
| Bury & Rochdale       | 22.4   | 11.0  |
| North Cheshire        | 15.9   | 5.2   |
| South Cheshire        | 18.5   | 4.6   |
| East Lancashire       | 16.5   | 7.8   |
| South Lancashire      | 18.2   | 6.2   |
| North West Lancashire | 19.8   | 7.1   |
| Wigan & Bolton        | 19.9   | 10.1  |
| Wirral                | 17.1   | 6.2   |
| England               | 17.4   | 7.1   |

Research undertaken in the North West indicates that alcohol consumption amongst young people in the region is particularly high. A recent study on a selected group of young people returning to the North West from Ibiza found that 96.3% of people aged 16 to 24 drank alcohol in the UK, with 18.7% drinking on five or more nights per week. Whilst in Ibiza these figures had increased to 97.2% drinking alcohol and a staggering 83.6% drinking five or more nights a week<sup>47</sup>. However, these individuals are not necessarily representative of all young people in the North West. A study undertaken on school children (aged 14-19) in North Cheshire found that only 8% of respondents had never drunk enough alcohol to feel drunk, whilst 38% reported drinking enough to feel drunk every week and 3% feeling drunk every day<sup>48</sup>.

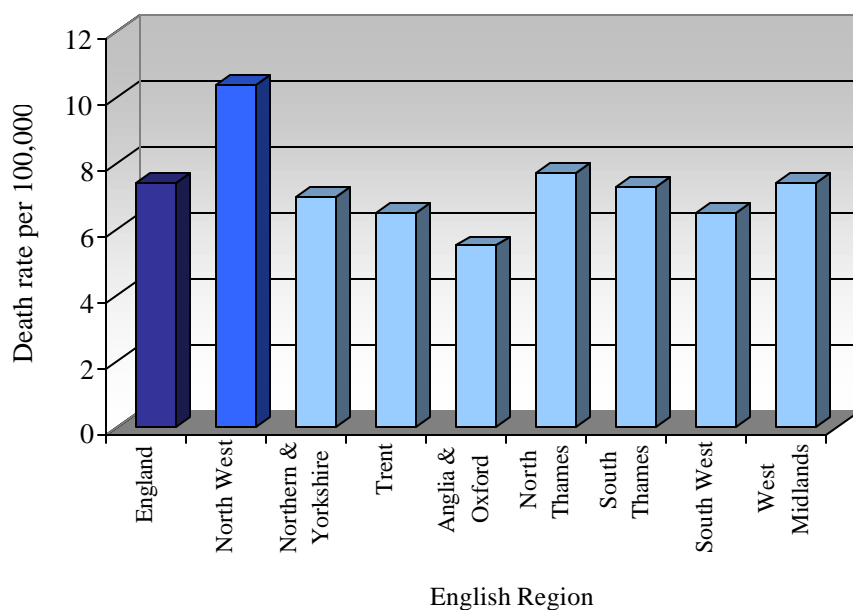
## 3.2 ALCOHOL: THE REGIONAL BURDEN ON HEALTH

The higher than average volume of alcohol consumed by individuals in the North West would indicate that the region experiences a high number of alcohol-related problems. However, there is as yet no regional system for recording individuals entering counselling and/or treatment for their alcohol-related problems. It is possible that in the future the Regional DMDs and Arrest Referral monitoring will collect alcohol data alongside drug misuse data. At present, alcohol use as a subsidiary drug is collected by the DMDs, although only relatively small numbers of clients report alcohol consumption (in the North West, ranging from 2% of clients in Sefton to 16% of clients in Stockport and Salford & Trafford)<sup>49</sup>. However, actual alcohol consumption is be much higher as drug users may not recognise their drinking to be a problem and therefore do not report it to agencies.

The burden of alcohol on the region's health service is clearly illustrated by research undertaken in Liverpool, which found that alcohol was directly responsible for 12.5% of Accident and Emergency attendances, one quarter of intensive care admissions, and 1.3% of GP consultations<sup>50</sup>. Data from alcohol-attributable injury seen in hospital wards also provides useful evidence. A study by the Royal Liverpool University hospital into health care of people attending nightclubs found that about 1% (around 1000) of Accident and Emergency cases in 1998 were due to nightclub attendance<sup>51</sup>. Of these, alcohol was a major factor in more than one third of cases (drugs only accounted for 4% of cases). Injuries sustained included facial wounds (25%), head wounds (20%) and limb injury (20%). It is suspected that up to ten times as many cases of alcohol-related injury or intoxication are not treated by medics, that is they go untreated or self-treated. Many further cases treated are the result directly from alcohol-fuelled accidents or violence.

As well as treatment for injuries received whilst under the influence of alcohol, the cost of treatment for alcohol-related diseases is likely to be heavy in the North West. In 1997, there were 4,107 deaths from chronic liver disease and cirrhosis in England and Wales<sup>52</sup>, a significant number of which are likely to have been caused through alcohol abuse. There is also a link between these diseases and the use of illegal drugs through hepatitis B and C. Figure 2.9 shows average annual death rates from chronic liver disease and cirrhosis broken down by region. The North West rate is much higher than the English average and much higher than any other English region. Whilst women in the North West do report the highest prevalence rates of alcohol consumption of all English regions, men in the North West do not, and therefore the high rates of chronic liver disease and cirrhosis for North West males are quite disturbing.

**Figure 2.9: Mortality from chronic liver disease and cirrhosis: average annual death rate (per 100,000) between 1995 and 1997, by region<sup>52</sup>**



**Table 2.3: Mortality from chronic liver disease and cirrhosis: average annual death rate (per 100,000, between 1995 and 1997, by Health Authority<sup>52</sup>**

|                       | Male | Female | All  |
|-----------------------|------|--------|------|
| Liverpool             | 19.1 | 10.4   | 14.7 |
| Manchester            | 16.9 | 11.5   | 14.1 |
| Morecambe Bay         | 9.0  | 6.6    | 7.7  |
| St Helens & Knowsley  | 12.6 | 11.1   | 11.9 |
| Salford & Trafford    | 10.2 | 8.5    | 9.3  |
| Sefton                | 12.7 | 5.3    | 8.8  |
| Stockport             | 9.3  | 6.5    | 7.9  |
| West Pennine          | 13.4 | 7.9    | 10.6 |
| Bury & Rochdale       | 9.5  | 8.6    | 9.0  |
| North Cheshire        | 12.1 | 8.6    | 10.3 |
| South Cheshire        | 8.5  | 5.6    | 7.0  |
| East Lancashire       | 9.9  | 6.6    | 8.3  |
| South Lancashire      | 9.3  | 8.8    | 9.0  |
| North West Lancashire | 18.4 | 12.4   | 15.3 |
| Wigan & Bolton        | 10.2 | 7.3    | 8.7  |
| Wirral                | 18.0 | 9.8    | 13.7 |
| North West            | 12.4 | 8.4    | 10.4 |
| England               | 8.9  | 5.8    | 7.4  |

Table 2.3 shows average annual death rates from chronic liver disease and cirrhosis in the North West by Health Authority. North West Lancashire has the highest death rate overall, and the highest rates for women, whilst Liverpool has the highest annual rates for men. All these figures are more than double the English average rate. Of all Health Authority areas, only South Cheshire has an overall annual rate below the English average, also having below average rates for both males and females. The only other Health Authority area in the North West to have an average annual rate below the English average is Sefton, where women have the lowest rate of all areas<sup>52</sup>.

Health service data alone does not reflect the true burden of alcohol on rates of ill health and premature death. Accidental deaths, for example, where alcohol has been a direct factor may not be recorded as such. Equally, fatalities through road traffic accidents where alcohol has been a contributory factor will not be recorded as 'alcohol related'. Estimates of the wider health impacts attributable to alcohol in the North West must therefore be based on what we know from the research evidence of the relative medical and social impacts of alcohol misuse.

### 3.3 DRINK DRIVING

In 1999 there were 44,750 casualties in road traffic accidents in the North West, including 360 deaths<sup>53</sup>. Figures from the DETR show that 780 of these casualties were occupants of vehicles in which the driver failed a breath test, 7 being fatal, 135 serious and 638 slight. A further 72 individuals were injured in accidents for which the driver refused to provide a breath test. There were 20,917 casualties for which the driver passed a breath test, whilst breath tests were not implemented for the remaining 22,981 casualties. Casualties amongst occupiers of vehicles for which the driver either failed or refused to take a breath test therefore accounts for 4% of all casualties for which a breath test was requested. The actual drink driving casualty figures, however, are likely to be somewhat higher as the DETR estimates that around 20% of drivers killed on the roads have blood-alcohol levels above the legal limit<sup>39</sup>.

Breath test statistics can give a general idea of the incidence of drink driving in a region, although figures will vary according to police activity between regions. In Greater Manchester, the proportion of breath tests performed by police which are positive or tests that drivers refused to take is much higher than elsewhere in the Region and is among the highest rates in England<sup>54</sup>. These high rates are in line with the high alcohol consumption in Manchester shown in table 2.2. For the region as a whole, however, the positive/refused rate is in line with the national average (see table 2.4)

*Table 2.4: Percentage and rate of positive or refused alcohol tests by Police Force Area and the England/Wales total, 1998<sup>54</sup>*

| Police force area | Percentage of all tests | Rate of positive/refused tests per 100,000 population |
|-------------------|-------------------------|---|
| Cheshire          | 7%                      | 161   |
| Cumbria           | 8%                      | 161   |
| Gtr. Manchester   | <b>21%</b>              | <b>250</b>  |
| Lancashire        | 9%                      | 134   |
| Merseyside        | 13%                     | 176   |
| North West        | 12%                     | 176   |
| England & Wales   | 12%                     | 181   |

## 3.4 ALCOHOL AND CRIMINAL JUSTICE

Rates of alcohol-specific offences in the Region provide some insight into the extent to which alcohol misuse contributes to anti-social behaviour, but do not provide the full story. It is difficult to calculate precisely what rate of violent crime, for example, is the result of alcohol misuse. However, research carried out in the North West has found that alcohol is associated with many cases of violence in parts of the Region. For example, the research into nightclub health conducted by the Royal Liverpool University Hospital found that alcohol was responsible for a large proportion of Accident and Emergency cases entering hospital from nightclubs, of which one half of injuries were caused by assaults<sup>51</sup>.

There is a strong relationship between alcohol and violence (for example alcohol is a factor in 50% of cases of domestic violence), and therefore police records of violent crimes may give some indication of the burden of alcohol upon the health and criminal justice system and the general population. Table 2.5 shows the incidence of violent crime in the North West broken down by police area. Provisional figures from the Home Office<sup>i</sup> indicate that the highest rates of 'violence against the person' offences per 1000 population are found in Merseyside's City and Kirkdale area (31.6), followed by Greater Manchester's North Manchester area (19.5), whilst the lowest rate is in Cheshire's Congleton and Vale Royal area (2.0)<sup>55</sup>.

*Table 2.5: Incidence of violent crimes<sup>ii</sup> by police area in the North West, October 1998 to September 1999<sup>55</sup>*

| Police area        | No. of violent crimes | % of all crimes |
|--------------------|-----------------------|-----------------|
| Cheshire           | 7,157                 | 11.4            |
| Cumbria            | 5,960                 | 15.0            |
| Greater Manchester | 48,929                | 13.4            |
| Lancashire         | 11,660                | 10.4            |
| Merseyside         | 17,004                | 11.9            |

A Home Office study into drugs and crime found that 25% of arrestees across five cities tested positive for alcohol<sup>56</sup>. Arrestees testing positive for alcohol had been arrested for a variety of offences including actual bodily harm, robbery, burglary and various types of theft. Out of all five cities (Sunderland, Nottingham, Cambridge, London and Manchester), Manchester had the lowest percentage of arrestees testing positive for alcohol at 9%, but the highest percentages testing positive for several different drug types (see Section 2.4.8). Of the 464 arrestees reported to the Arrest Referral Monitoring system in Merseyside and Cheshire between July and September 1999, 3% were referred to alcohol services for treatment<sup>57</sup>.

<sup>i</sup> Figures are based on Basic Command Unit divisional levels used by the police force for accounting purposes, largely equivalent to local authority levels. Figures relate to the six-month period between April and September 1999.

<sup>ii</sup> Comprising offences of violence against the person, sexual offences and robbery

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