

Costs of Alcohol Use and Misuse in Scotland

1. Introduction

- 1.1 The costs presented here are based on a “Cost of Illness Approach”. This is a prevalence based methodology which attempts to quantify the costs associated with a particular illness or health related behaviour including both incident cases in the base year but also costs from individuals who still suffer. In this case it refers to alcohol use/ misuse.
- 1.2 The costs are presented in 2006/07 values. Where no data has been available for this year, previous years’ costs have been uprated by inflation.
- 1.3 Due to time constraints no primary data collection has been possible: the basis of the calculations are published data sources.
- 1.4 The basis of the methodological approach is the 2001 study¹ from which uprated estimates were produced by Scottish Government economists in 2004². Where no newer research is available and/or time constraints have not permitted further research, similar assumptions have been used.
- 1.5 These estimates should be treated as indicative only. They give an indication of the size and scope of the effect of alcohol use/misuse within Scotland. They are not exhaustive.
- 1.6 In common with all “cost of illness” studies it is not possible to directly compare the estimates produced in this paper with those previously produced. Policies, interventions and associated budgets have changed over the years: some of the assumptions have been altered in the light of newer research findings: data categorisation and collection may have improved or altered.
- 1.7 Due to the lack of data in certain areas, the figures are potentially underestimates of the true costs associated with alcohol use/misuse. Estimates are always open to revisions on the basis of new information and research and a more robust study incorporating primary research findings would undoubtedly produce different estimates from those presented in this paper.

2 Summary

- 2.1 Table 1 show the estimated indicative total cost to Scottish society in 2006/07 of alcohol misuse. **The total cost estimated is approximately £2.25bn.**
- 2.2 Appendix A shows the disaggregated costs for each resource category.
- 2.3 It should be noted that these estimates do not, as some costing studies may, include an estimate for intangible costs.

¹ Catalyst (2001) Alcohol misuse in Scotland: trends and costs

² Health Economics Unit; ASD HD, Scottish Government (2004) Cost to Society of Alcohol Misuse in Scotland: Na update to ‘alcohol Misuse in Scotland: Trends and Costs (Scottish Executive, October 2001)

Table 1: summary of costs of alcohol misuse 2006/07

Resource Category	Cost 2006/07 (£million)
NHS Scotland	405
Social Work Services	170
Criminal Justice & Fire Service	385
Wider economic costs	820
Human/social costs	470
Total	2250

3 NHS Costs

- 3.1 Much of the data required to accurately estimate the cost to the health services in NHS Scotland which are attributable to alcohol use and/or misuse are not routinely collected. The approach adopted follows the methodology adopted in both the 2001 and 2004 report. NHS unit costs are sourced from the Scottish Health Service Costs³.
- 3.2 GP consultations: Data on consultation directly attributable to alcohol was obtained from Practice Team Information ISD Scotland (130,250 in 04/05). This cost approximately £4m. An additional number of indirect consultations with all community staff were calculated using estimates of “alcohol attributable fractions” i.e. proportion of mortality and morbidity from certain conditions which have an alcohol related risk. The methodology is outlined in the Cabinet Office Strategy Unit paper⁴. Applying this methodology to all contacts using the alcohol attributable fractions for identifiable disease groups suggests an additional cost of between £3.5 and £12.5m. A mid point estimate of £8m is used.
- 3.3 GP-prescribed drugs: Disulfiram and Acamprostate are drugs specifically prescribed for alcohol dependency. Gross ingredient costs for these drugs were obtained from ISD. For 2006/07 the costs were disulfiram, £403,547 and acamprostate, £373,665. There are other drugs prescribed for alcohol withdrawal symptoms, in particular some of the benzodiazepines (e.g. diazepam, chlordiazepoxide). The estimate of £0.77m is therefore likely to be an underestimate of the cost of GP prescribed drugs.
- 3.4 Laboratory testing in primary care: A similar assumption to that in the previous studies was used. It was assumed that for each consultation directly attributed to alcohol misuse there would be a biochemistry test (liver function tests) and a haematology test (mean corpuscular volume) requested. This leads to a figure of 260,500 tests at a cost of £840,000.
- 3.5 Hospitalisation days: the number of hospitalisation days directly attributable to alcohol – both acute and psychiatric - was obtained from alcohol related ICD codes (ISD Scotland). In 2005/06 there were 140,796 acute bed days directly attributable to alcohol

³ Scottish Health Service Costs <http://www.isdscotland.org/isd/797.html>

⁴ Cabinet Office Strategy Unit (2003) *Alcohol Misuse: how much does it cost Annex 1.*

and 362,760 psychiatric. The average cost of a bed day was calculated from the Scottish Health Service Costs data: £374 for an acute bed and £259 for psychiatric.

- 3.6 The additional hospitalisation days indirectly attributed to alcohol were calculated using methodology outlined in the Cabinet Office Strategy Unit paper⁵. This estimates the “alcohol attributable fractions” i.e. proportion of mortality and morbidity from certain conditions which have an alcohol related risk¹. They produced low and high estimates based on work from WHO⁶, Britton & McPherson & Correo. This results in an additional number of acute hospitalisation days of around 234,000. The estimate for the total cost of acute hospitalisation days was £140.2m. Using slightly different assumptions raises the number of indirect admissions and suggests that the total cost of admissions could be over £150m.
- 3.7 The 2001 study estimated that an additional 1% of psychiatric admissions were indirectly attributable to alcohol. This assumption is replicated here adding nearly 4,000 bed days. The estimate for the total cost of psychiatric hospitalisation days was £94.8m.
- 3.8 A&E attendances: the number of attendances at A&E units in Scotland in 2006/07 (1,574,990) and the average cost of an attendance (£82) were obtained from the Scottish Health Service Costs Book. A QIS report (2006)⁷ estimated that 11% of A&E attendances were alcohol related. This is at the lower end of estimates from various studies which have found rates of alcohol related attendance at A&E of between 4% and 46%. The Cabinet Office Strategy Unit suggested, from unpublished research commissioned by them, that up to 35% of all accident and emergency attendance and ambulance costs are alcohol related⁸. The figure of 11% seems likely to be an underestimate. If the proportion is nearer 46% the cost would be around £59m. A figure of 25%, at a cost of £32.3m, is used in these estimates, which is both more consistent with the Strategy Unit work and nearer the mid point of other studies.
- 3.9 Out patient visits: there were 302,087 out patient general psychiatry visits in 2006/07. The cost of each psychiatric visit is £82. Using similar methodology to the 2001 report, it was calculated that 15% of psychiatric admissions are linked to alcohol: also that @ 5% of GP visits are due to an alcohol related psychiatric consultation. The mid point of this was used to estimate the number of psychiatric OP visits that were attributable to alcohol.
- 3.10 There were 6,131,162 out patient attendances (all types, excluding psychiatry, obstetrics, & learning disability). The cost of each general visit is £100. For inpatient episodes, between 5 and 8% are alcohol related (both direct and indirect). For GP visits alcohol related contacts represent in excess of 12% of contacts for the practice team. The number of OP visits associated with alcohol related disease (both direct and indirect) is estimated at 10%. This is in line with the WHO Global Burden of Disease which estimates that alcohol causes nearly 10% of all ill health and premature death in Europe. The total costs of outpatient visits was estimated at £63.5m.

⁵ Cabinet Office Strategy Unit (2003) *Alcohol Misuse: how much does it cost Annex 1*.

⁶ WHO(2000) *International guide for monitoring alcohol consumption and related harm*

⁷ QIS (2006) *Understanding Alcohol Misuse in Scotland: Harmful Drinking: One: the size of the problem*. NHS QIS

⁸ Drummond et al in Cabinet Office Strategy Unit (2003) *Alcohol Misuse: how much does it cost? Interim analytical report*

- 3.11 Day hospital visits: there is data available for the number of visits and associated cost for both general psychiatric attendances and geriatric psychiatric attendance. Again the assumption the 10% of these may be alcohol related is used at a cost of £3.7m.
- 3.12 Community psychiatric team visits: again assumes that 10% of visits are attributable to alcohol related illness at a cost of £12.6m.
- 3.13 Ambulance journeys: activity and cost data were obtained from Scottish Health Service Costs. Assuming that alcohol related costs were most likely to be associated with “road ambulances”: there were 569,372 road ambulance incidents at a cost of £221.51 per incident. The original study, and the update in 2004, used an assumption of 12% of road ambulance incidents attributed to alcohol⁹. In light of the Strategy Unit assumption of 35%, a figure of 25% is used here with a cost estimate of £31.5m. This may still be an underestimate.
- 3.14 There are expenditure items directly attributable to alcohol use, rather than costs associated with resource use. These are included as costs to NHS Scotland for consistency with the previous estimates in 2001 and 2004. They include specific treatment and health promotion activities which are directly targeted at alcohol misuse. Treatment: there is specific budget attributed to alcohol treatment, including Drug and Alcohol teams. In 2006/07 this amounts to £11 million. Health promotion/prevention: there is money allocated for communications for ADAT teams and also to voluntary organisations; Alcohol Focus Scotland and Scottish Health Action on Alcohol Problems of around £600,000.
- 3.15 Joint drugs/alcohol funding: there have been many changes in policy/treatment approaches and in resources directed to substance misuse since the original research in 2001. There are many approaches which draw together expertise across both alcohol and drug misuse and funding is allocated in this manner. Where it has been possible to identify such funding it has been assumed that 50% is attributable to alcohol (£1.25m). This may underestimate in some cases and overestimate in others.

4 Social Work Services

- 4.1 Costs associated with alcohol are derived from 3 main areas of social work: children & families (including children’s hearings); community care and criminal justice social work services.
- 4.2 Children and families: in 2006/07 total expenditure on children and family services was £639m.¹⁰ A survey by Aberdeen City Council in 1997 reported that 24% of children’s social work had alcohol cited as a factor in referral. This figure was substantiated in 2001 by a Scottish Executive working group¹¹. This gives an estimate of the associated cost of £153m in 2006/07.

⁹ Pirmohamed et al (2000) The burden of alcohol misuse on an inner city general hospital. *Quarterly Journal of Medicine* vol 933 pps 291 - 295

¹⁰ Local Government Finance Statistics: Table 4A Detailed analysis of revenue account 2006-07.

¹¹ Catalyst (2001) Alcohol misuse in Scotland: trends and costs

- 4.3 Children’s Hearing System: in 2006/07 there were 56,199 referrals to the children’s hearing system in Scotland¹². Of these, 1609 had grounds of “misused drugs or alcohol”. It is assumed that half were for alcohol misuse. There were 19,086 referrals for “lack of parental care”. In common with the 2001 report, it is assumed that 24% of these referrals were partly or mainly due to alcohol abuse. This gives a cost to the Children’s Hearing system of £2.3m. There is an additional cost to social work services in contributing to the system; this is estimated at nearly £300,000¹³.
- 4.4 Community Care: Services for adults with substance misuse problems incurred an expenditure of £42m in 2006/07 for local authorities¹⁴. It is assumed that 25% of the cost is attributed to alcohol.
- 4.5 There are attributed to the small number of care home beds specifically allocated to individuals with drug and/or alcohol problems and home care. Community care statistics previously published data for home care, day care and residential care for individuals with “HIV, AIDS, drugs or Alcohol problems”. Data is no longer categorised in this way but it is assumed that the proportion of spend has remained stable since 2002 when 1% of care home place and 0.1% of home care was for this category. It is further assumed that 25% of this category was alcohol related adding £2m to costs. Alcohol misuse is a factor in many groups requiring community care – e.g. homeless, elderly, those with mental health – so this is likely to be an underestimate.
- 4.6 Criminal Justice Social Work: in 2006/07, criminal justice social work expenditure was £101m¹⁵. Around 3% of both community service orders and probation orders were for offences which specifically mention alcohol (191 CSOs & 252 POs).
- 4.7 In addition there are other offences in which alcohol is likely to have been the key factor: 16% of probation orders had alcohol or drug treatment orders attached. This helps substantiate the assumption that 25% of community service orders and probation orders were for alcohol related crime. The estimated of cost to social work criminal justice services is 28% of expenditure, £33.3m.

5 Criminal Justice

- 5.1 Costs incurred in response to alcohol misuse in this category are in 4 main areas: police time: court proceedings: custodial sentences and costs to other emergency services.
- 5.2 The total number of specific alcohol related offencesⁱⁱ recorded by the police in 2005/06 is shown in table 2. They make up 1.8% of total recorded crime¹⁶.

¹² SCRA Annual report 2006/07)

¹³ Local Government Finance Statistics: Table 4A Detailed analysis of revenue account 2006-07

¹⁴ Local Government Finance Statistics: Table 4A Detailed analysis of revenue account 2006-07

¹⁵ Local Government Finance Statistics: Table 4A Detailed analysis of revenue account 2006-07

¹⁶ Recorded Crime in Scotland 2006/07 Sep 2007 Scottish Government

Table 2: number of alcohol related crime recorded 2005/06

Main crime or offence		% of all recorded crime
Drunkenness	6664	0.7%
Drunk driving	11704	1.1%

- 5.3 In addition, it is assumed that alcohol is a key factor in a number of other offences. In England, police superintendents have indicated that alcohol is present in half of all crime¹⁷. In particular, alcohol is associated with violent crime. The British Crime Survey 2006/07 states that 46% of violent incident victims believed their attackers to be under the influence. Of the 106 accused persons in homicide cases recorded in 2004/05 whose drink/drug status was known at the time of the homicide (56 % of all accused), 46 % were drunk¹⁸.
- 5.4 The British Crime Survey 2006/07 also found that alcohol was involved in 39% of cases of domestic abuse. In the evaluation of the Pilot Domestic Abuse Court in Glasgow (2007) police identified that in 43% of cases “the alleged offender had consumed enough alcohol to merit mention”¹⁹.
- 5.5 Although alcohol is cited as a key factor in a number of offences it is likely that it is interacting with other social, environmental and individual factors. It is assumed that in the case of violent crimes listed in table 3, alcohol was involved in 40% of cases.

Table 3: number of violent offences in which alcohol is assumed to be the key factor

Crime/offence	Number recorded	40% assumed to be alcohol related
Serious Assault (includes homicide and attempted murder)	7504	3002
Rape & attempted rape	1123	449
Minor Assault	78167	31267

- 5.6 For all other recorded crime, it is assumed that alcohol is involved in around 25% of offences. (This is consistent with previous estimates²⁰.) This may well be an underestimate. Taken together this represents 27% of recorded crime in Scotland in 2005/06.
- 5.7 The total cost of policing in Scotland in 2006/07 Was £1.06bn. Recorded offences directly attributable to alcohol represent 1.8%. Those in which alcohol was a key factor have been estimated to be over 25%. The total cost of policing attributable in response to alcohol misuse is estimated at £288m. This will be an underestimate if the percentage of cases in which alcohol is the critical factor is higher than the assumptions used.

¹⁷ Report from The Crime and Society Foundation, October 2004, [hosted by the Centre for Crime and Justice Studies] in *Alcohol and Crime* IAS Factsheet

¹⁸ Homicide in Scotland 2004/05 Statistical Bulletin

¹⁹ Reid Howie Associates (2007) *Evaluation of the Pilot Domestic Abuse Court* Scottish Executive p 26

²⁰ Catalyst (2001) *Alcohol misuse in Scotland: trends and costs*

- 5.8 There are costs associated with the judicial process. In 2005/06 96% of cases prosecuted were dealt with in a Sheriff Summary or District Court²¹. A weighted average for prosecution costs for both sheriff and district court was calculated (61% of all prosecutions are in sheriff court and 35% in district). Court costs are available only for sheriff court. In 2005/06 there were 8,500 prosecutions for drink related offences. Additionally, a number of prosecutions are likely to be for offences in which alcohol was a key factor. The assumption of 27% of cases overall being alcohol related is applied.
- 5.9 A number of factors are likely to make the figure of £19m an underestimate. The number of cases involving alcohol may be higher than 27%. If remitted to Sheriff Solemn (i.e. with a jury) or High Court, then costs will be considerable higher. Neither do the costs include any estimate for legal aid.
- 5.10 There are costs incurred for those receiving a custodial sentence where alcohol was involved in the offence. This can either be because the sentence is for an “alcohol related offence” or where alcohol was a key factor in the perpetration of an offence.
- 5.11 Specific alcohol related offences for which custodial sentences were received are detailed in table 4.

Table 4: number convicted & awarded custodial sentence & sentence lengths for alcohol related crime 2005/06

Main crime or offence	Total	Length of custodial sentence			
		Up to 3 months	3 to 6 months	6 months to 2 years	2 – 4 years
Drunkenness	5	5			
Drunk driving	165	86	75	3	1

- 5.12 The average annual cost per prison place in 2006/07 is £40,499. In any one year, prisoners in custody for alcohol related crime would make up only around £2m of expenditure.
- 5.13 In the same manner as assumptions have been made regarding the proportion of other offences which are alcohol related an estimate has been applied to the number of convictions for offences in which alcohol misuse was a key factor. In 2005/06 12,719 crimes or offences attracted a custodial sentence. In 2006/07, the average daily population in Scottish prisons totalled 7,183. If, like recorded crime, around 27% of them are incarcerated as a result of alcohol related crime then, annually, that represents a cost of £78m. This excludes the impact of any cost attached to treatment programmes within prison.
- 5.14 Fire Service: alcohol plays a role in both deliberate and accidental fires. Recorded crime includes “fire raising” and the figures from both the police and fire brigade suggest that around 10% of all primary firesⁱⁱⁱ are deliberate. Using the same 25%

²¹ PRISON STATISTICS SCOTLAND, 2006/07 Statistical Bulletin

assumption as for other crimes, this suggests that alcohol played a part in around 1200 fires annually which are started deliberately. This represents 2.6% of the total number of fires attended. The proportionate expenditure in 2006/07 on fire fighting and rescue is £6.2m.

- 5.15 Secondary fires, for which there is not as much detailed information, may include some fires associated with vandalism. The most common secondary fires were refuse fires (69 per cent) and grassland fires (21 per cent)²². A proportion of these is likely to be alcohol related. The cost of these is not estimated here.
- 5.16 Alcohol is also implicated in accidental fires: 24 people lost their lives in alcohol-related fires in Scotland in 2006/07. Alcohol is one of the greatest contributory factors to people dying in accidental dwelling fires in Scotland and remains a significant problem for fire and rescue services²³. There is no data on the percentage of accidental non fatal fires that involve alcohol.
- 5.17 A proportion of time for the fire and rescue services are spent dealing with road traffic accidents. There is no data available indicating the percentage of these in which alcohol is a factor.

6 Economic costs – cost to productive capacity of Scottish economy

- 6.1 Alcohol misuse may reduce the productive capacity of an economy thereby imposing a cost. This may be in a number of different ways. Absenteeism and presenteeism (reduced activity/productivity due to alcohol) will impact directly on employers. Forty percent of employers believe that alcohol misuse has a significant effect on both absenteeism and lost productivity²⁴. Unemployment and premature mortality in the working population impacts both on employers and individuals.
- 6.2 The economic costs have been estimated using a human capital approach. This involves applying a cost, based on average wages, to lost productive time.
- 6.3 Presenteeism: this is where there is a reduction in work performance /productivity by those who are at work, as a result of alcohol misuse. Survey data in 2004²⁵, suggest that on average, workers turn up to work two and half days a year, hungover. Workers themselves thought that they were only 73% as productive on these days. This suggests that workers lose the equivalent of an average of 0.68 days annually. In Scotland this equates to approx 1.7 million days, at a cost to business of around £200m.
- 6.4 Absenteeism: in 2001 across the whole UK workforce over 176m working days were lost due to sickness. Between 6 and 15% can be attributed to alcohol related illness²⁶. Across the UK this was estimated to cost around £1.5bn. The absenteeism estimates were based on data from Labour Market Trends and the CBI survey. In 2006, the CBI

²² Fire Statistics Scotland 2005 (2007) Scottish Government

²³ Alcohol Focus Scotland:

<http://www.alcohol-focus-scotland.org.uk/newsandevents/newsdetail.asp?ipordocid=333>

²⁴ Chartered Institute of Personnel and Development (2007) reported in PersonnelToday.com

²⁵ Reed (2004)

²⁶ Leontaridi (2003) in Cabinet Office Strategy Unit (2003) *Alcohol Misuse: how much does it cost?* Interim analytical report

survey suggested that 175 million days across the UK were lost as a result of absenteeism at a cost of £13.4bn. Using a similar assumption, in 2006, alcohol related absenteeism, for the UK, would lie between 10.5m and 26m days lost.

- 6.5 Employment in Scotland represents 8.6% of UK employment. Assuming that the rate of absence and alcohol related absence has remained steady, this suggests that alcohol related absenteeism adds in the region of a further £200m. (Although if absenteeism were to be at the higher end of the range then the cost would be approx £280m)
- 6.6 Unemployment: the relationship between drinking and unemployment is not straightforward although there is evidence that excess drinking is negatively associated with employment²⁷. Data on the number of people unemployed due to alcohol misuse is not available. The 2001 study calculated that the unemployment rate, at that time, for individuals who are alcohol dependent was higher than the general population. The value of this additional unemployment was calculated as £84m. The Cabinet Office paper uses different methodology which suggests that the value of alcohol related unemployment to the Scottish economy in 2001 was more likely to be around £146m.
- 6.7 Data was not available to replicate the 2001 methodology. Uprating the lower figure (from this methodology) for inflation suggests that excess unemployment due to alcohol dependency costs the Scottish economy around £96m.
- 6.8 Premature mortality: in 2005 there were a total of 2,372 alcohol related deaths in Scotland. From 1999 (data used in 2001 report) to 2004 the number of alcohol related deaths rose 21 per cent, from 1,694 to 2,052 people. There will also be deaths indirectly attributable to alcohol.
- 6.9 In people of working age, premature mortality from alcohol related deaths (alcohol as the primary casual factor) accounts for approx 15500 years of working lives lost. This was calculated from the mean age of death of the 2372.
- 6.10 Using GRO records for cause of death indirectly linked to alcohol, in 2006, working years lost were calculated by applying alcohol attributable factors for each disease group^{iv} identified to the number of deaths in each age group; then applying the economically active rate (0.75%) and subtracting the number of years lost from the usual retiral age of 65. In people of working age there were an additional 3300 working years lost. (This may a low estimate) This gives a total of @ 18800 years lost. The cost was calculated as the discounted stream of earnings (using average annual salary data).
- 6.11 The number of years was adjusted for the unemployment rate: the total estimate of loss from premature death in the working age population is £328m.

7 Wider societal costs

- 7.1 Estimating the wider social costs of alcohol misuse is particularly challenging. Many of the costs in terms of human suffering are intangible and are not quantified in routine data collection. By definition “intangible” costs are difficult to quantify.

²⁷ Cabinet Office Strategy Unit (2003) *Alcohol Misuse: how much does it cost?* Interim analytical report

- 7.2 One of the sources of additional societal cost are those incurred by individuals who are the victims of alcohol related crime. Costs from the Home Office estimates of 2005²⁸ have been applied as far as possible to data and assumptions outlined in section 5^v. These apply related costs for physical and emotional impact on victim; victim services; lost output, health service use and the value of property stolen or damaged. The estimate is £144m. It should be noted that only 20% of the crimes estimated to have alcohol as a key factor (excluding homicide) could be costed in this way.
- 7.3 In 2006 there were 139 homicides in Scotland. If we assume that alcohol was involved in 40% of them then applying the same methodology puts a value of £51m on those^{vi}.
- 7.4 In addition an estimate of the value of the value of alcohol related fire deaths has been included. As previously stated there were 24 in 2006. The Willingness to Pay (WTP) value of avoiding the human suffering attributed to a fatal road injury is applied.²⁹ This adds a further £23 million.
- 7.5 In terms of wider costs to society the 2001 Catalyst report for Scotland focused on using the DETR value for a year of life to estimate the cost of premature mortality due to alcohol in the non-working population and estimated it at £217m (£249m in 06/07 values).
- 7.6 Updating the 2001 estimate for premature mortality in non working population adds another £248m.
- 7.7 A recent study by Lister et al³⁰ describes social impacts and intangible costs as those costs which attempt to place a human value on death & disability, based on willingness to pay to avoid such outcome. For England it identified the intangible social cost attributable to alcohol misuse as £16.1bn. This would suggest a figure of around £1.4bn for Scotland.
- 7.8 The Lister paper also uses DETR intangible “willingness to pay” values to produce estimates for both alcohol related crime and social intangible costs and health social intangible costs but based the costs on willingness to pay (WTP) to avert a death.
- 7.9 The WTP approach (para 7.4) attempts to capture the psychological effects of premature death. Estimates of this kind tend to overwhelm the approach taken in 2001 and considerable difficulties still exist in the accuracy and consistency of such approaches. There were no studies found that assess the value that people put on reducing mortality risks associated with alcohol use in the same way as the extensive work carried out for road accidents. (The exception to this is described in paragraph 7.4 where it was judged appropriate to treat sudden death in a fire in a similar manner to death in a motor vehicle accident.)
- 7.10 Neither the intangible cost of morbidity due to alcohol use or the intangible value of premature mortality is presented here.**

²⁸ Home Office (2005) The economic and social costs of crime against individuals and households 2004/04

²⁹ Dept for Transport (2005) Highways Economics Note No. 1 *Valuation of the Benefits of Prevention of Road Accidents and Casualties*

³⁰ Lister G, Fordham R, Mugford M, Olukoga A, Wilson E. & McVey D. (2006) *The Societal Costs of Potentially Preventable Illnesses: A Possible Approach*

7.11 Taken with all the preceding caveats around areas where it has not been possible to provide a costing the overall estimate underestimates the true cost to society of alcohol use and misuse.

*ASD -Health
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ⁱ In line with the Cabinet Office paper , the Catalyst report and the IAS factsheet (2008) *Alcohol and Health* the following conditions are regarded as partially alcohol related.

Table i. Diseases associated with alcohol abuse			
neoplasms	circulatory	gastrointestinal	Injuries and adverse events
Colo-rectal cancer	Sub arachnoid haemorrhage	Acute pancreatitis	Assaults
Oro-pharyngeal cancer	Haemorrhagic stroke	Chronic pancreatitis	Accidental drownings
Naso-pharyngeal cancer	Essential hypertension		Falls
Oesophageal cancer	Ischaemic heart disease		Accidents die to fire/flames
Breast cancer			Occupational injuries
Liver cancer			Motor vehicle accidents
			Suicide

Although the Royal College of Physicians in *A Growing Evil: - The Medical Consequences of Alcohol Abuse* (1987) produced a much longer, and more detailed list of medical problems. The WHO has also published a long list of conditions with a range of alcohol attributable fractions. This is shown in Appendix 1 of *Alcohol misuse: how much does it cost?* Table i is the basis of the low estimates for indirect healthcare use in the Cabinet paper; the WHO list is the basis of the high estimates. There is ongoing work in Scotland to revise the classification of diseases associated with alcohol use and alcohol attributable fractions.

ⁱⁱ Those with a reference to alcohol in the title : i.e. drunkenness and drunk driving

ⁱⁱⁱ Primary fires are reportable fires or any fires involving casualties, rescues, or fires attended by five or more appliances regardless of its actual physical location. (Reportable fires are fires which occur in a. Buildings, Caravans, trailers etc; b. Vehicles and other methods of transport (not derelict); c. Outdoor storage, plant and machinery ; d. Agricultural and forestry premises and property ; e. Other outdoor structures including post boxes, tunnels, bridges etc.)

^{iv} Consistent with table i.

^v The English legal system varies from the Scottish: crimes and offences are different: where possible costs have been attributed to crimes of assault, sexual offences; theft and vandalism.

^{vi} The methodology for estimating the emotional and physical costs is based on health outcomes which were expressed as loss of QALYs which then had monetary values applied; these monetary values were sourced from research undertaken for the DfT.

Appendix A

Table A: summary of NHS cost attributable to alcohol misuse 2006/07

Resource Category	Cost 2006/07 (£million)
GP/practice consultations	12
GP prescribed drugs	0.77
GP initiated lab tests	0.84
Hospitalisation days (acute)	146
Hospitalisation days (psychiatric)	89
A&E attendances	32
Outpatient appts	64
Community psychiatric service	13
Day hospital	3
Ambulance	32
Health improvement/specific funding	13
Total	405

Table B: summary of social work cost attributable to alcohol misuse 2006/07

Resource Category		Cost 2006/07 (£million)
Children's Hearings (SCRA)		2
Social work :		
	Children's hearings	0.3
	Children & families	153
	Substance misuse	11
	Community care	2
	Criminal justice	33
total		169

Table C: summary of criminal justice & emergency services cost attributable to alcohol misuse 2006/07

Resource Category	Cost 2006/07 (£million)
Police time	288
Court and legal costs associated with <i>prosecutions</i>	19
Custodial sentences	78
Fire service	6
Total	385

Table D: summary of "economic" cost attributable to alcohol misuse 2006/07

Resource Category	Cost 2006/07 (£million)
Presenteeism	203
Absenteeism	190
Unemployment	96
Premature death	328
Total	818

Table E: summary of human cost attributable to alcohol misuse 2006/07

Resource Category	Cost 2006/07 (£million)
Consequences of crime	145
Homicide	51
Deaths in fires	23
Excess mortality	248
Total	466