

Audit Report on a Sample of Alcohol Related Deaths

Greater Glasgow Area

2010

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Index

	Page
Background	4
Study Design	9
• Local Service Changes	9
Audit Findings	10
• General Epidemiology	10
• Primary Care, Alcohol Consumption and Alcohol Related Contacts	11
Problematic Alcohol Use based on Data from all Casenote Sources	14
Co-morbid Health Issues	15
Family and Social Issues	16
Occupation and Opportunities for Employment	17
Referral to Alcohol Services	18
• Acute Addiction Liaison	18
• Community Addiction Team	18
• Other Substance Misuse	20
Acute General Hospital	22
• Biomarkers of Alcohol Misuse	22
• Accident and Emergency Attendance	23
• Outpatients	23
• Inpatients	24
Psychiatry	26
• Type of Service Used	26
• Medication Used in Management of Alcohol Use	28
• Detox	29
• Aversive Treatment and Relapse Prevention	31
Social work	31
Police, Prisons, Fire Service and Voluntary Organisations	33

Cause of Death	35
Conclusions	36
• Services Attended	36
• Gender Differences	37
• Psychiatric Services	38
• Employment and Social Problems	38
• Screening and Identification	39
• Comorbidity	40
• Acute Services	40
Recommendations	42
References	44
Appendix A - ICD 10 Codes Used in 2003 and 2010 Audits	45
Appendix B - Causes of Death 2010 Audited Sample	46
Appendix C - Main Causes of Death by sex where alcohol is among causes of death	47
Appendix D - Data Collection Form	48
Appendix E - Index of Tables	60
Appendix F - Index of Figures	61

Background

The report presents the findings of an audit of alcohol related deaths which occurred in NHS Greater Glasgow and Clyde (GGC) in 2010. It was undertaken to assess the impact of addiction service redesign following recommendations of an earlier audit of alcohol related deaths conducted in the old Greater Glasgow Health Board (GGHB) area in 2003¹. The methodology of the previous audit was followed as closely as possible to permit an evaluation of service changes on patient outcomes.

The purpose of reviewing alcohol related deaths was to identify whether service changes have made a difference. Services work hard to keep people alive, but it is difficult to estimate the number of deaths prevented by these changes. A review of the changes in services along with a change in the management of people who die of an alcohol related cause helps to provide an estimate of their effectiveness. An improvement in services may lead to a reduction in death rates.

Other factors including the Scottish Government Alcohol Policy, Changing Scotland's Relationship with Alcohol: A Framework for Action introduced in 2009 and wider social factors could also have influenced the death rate in the period under review, so not all the observed differences will be due to local service changes².

In order to make the audit as close as possible to the previous 2003 audit we followed the same methodology. It defined an alcohol related death as one where an alcohol related diagnosis was mentioned as the underlying cause of death or as a contributory factor. The ICD 10 codes used for the identification of cases is shown in Appendix A. Only cases who resided in the boundaries of the old GGHB area were included in the sample as the changes to the delivery of the service in this area was the focus of the audit.

The imperative to review alcohol services in Scotland and Glasgow in particular is based on epidemiological findings which show that the level of alcohol deaths in Scotland has been consistently higher than the rest of the UK for a number of years. The office of National Statistics reports that the prevalence of alcohol related deaths has been relatively stable in

the UK from 2012-2015³. The annual death rate in 2015 was 14.2 per 100,000 population (19.2 per 100,000 males, 9.2 per 100,000 females). The highest UK death rate for males was in the 60-64 year age group at 44.9 per 100,000 and the highest death rate for females was 23.1 per 100,000 in 55-59 year olds. While Scotland compares poorly with the other UK countries for both males and females, it has seen the steepest decline in alcohol deaths in recent years. A comparison of the death rates in the UK constituent countries is shown in figures 1 and 2.

Figure 1. Age Standardised Death Rate per 100,000 Males (European Standard Population)

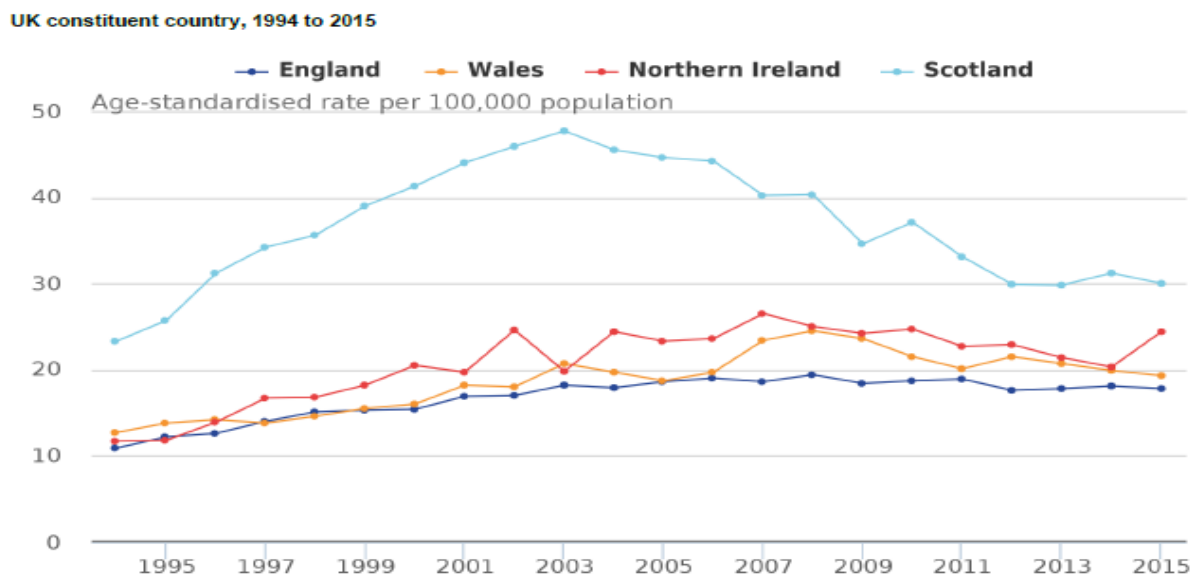
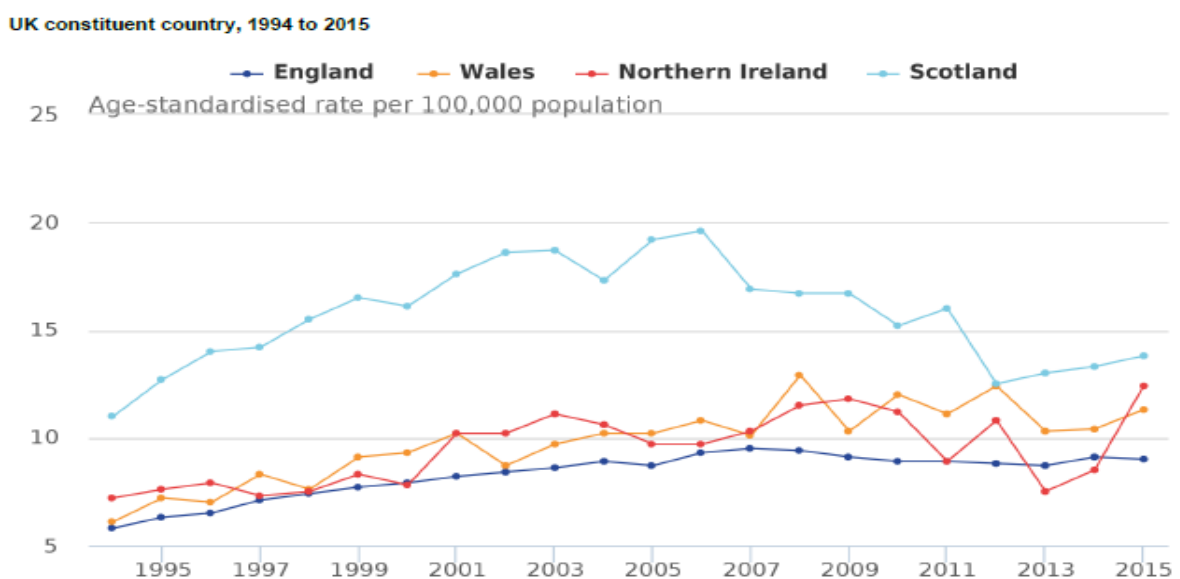


Figure 2. Age Standardised Death Rate per 100,000 Females (European Standard Population)



The National Records Office of Scotland, which uses slightly different definitions to that of the National Statistics Office, found that Scotland averaged 600 alcohol related death per year in the 1980s, rising rapidly in the 1990s and 2000s to 1546 in 2006 and has since declined⁴. In 2010 there were 1318 alcohol related deaths in Scotland, (909 males, 409 females) and 364 alcohol related deaths in GGC⁴. The figures are based on the health board boundaries that applied with effect from 1st April 2014 and show what the numbers would have been had the new boundaries applied then. The ratio of male to female deaths has been roughly 2:1 in both Scotland and GGC since 1979⁴.

Scotland and GGC show a similar trend in alcohol related deaths for both sexes. The decline in alcohol related deaths in Scotland was driven by falling rates in those living in the most deprived areas and their incomes started to fall before the rest of the population and before the onset of the 2008 global recession⁵. More of the Scottish population live in the most deprived circumstances than in England and Wales and a greater proportion of alcohol related deaths are found in the most deprived communities than in England and Wales⁵. The Scottish Index of Multiple Deprivation 2012 identified Glasgow City to contain 29.6% of the 15% most deprived data zones in Scotland by local authority area⁶. The proportions in West Dunbartonshire, East Renfrewshire and East Dunbartonshire were 3.2%, 0.7% and 0.3% respectively, so part of the cause of the higher rate of alcohol related death is likely to be higher levels of deprivation and the decline in alcohol related death rates from falling incomes and a resulting increase in the relative price of alcohol^{5,6}. It would be hard for service changes to show a large impact on alcohol related deaths in a short time period.

A comparison of the decline in alcohol death rates in Scotland and Greater Glasgow and Clyde by deprivation quintile, with 1 being the most deprived group, is shown in figures 3 and 4. They illustrate the steeper decline in GGC compared to Scotland. Analysis of male and female death rates separately found that the decline in the GGC death rate was largely driven by the decrease in the rate of the most deprived males. The pattern in females, while showing a decrease, has not declined at the same rate. Fewer women drink at hazardous levels so the impact on them has been less.

The Scottish Alcohol Needs Assessment drew attention to the fact that Greater Glasgow had the highest prevalence of hazardous and harmful drinking (Greater Glasgow 30.3%, Scotland

27.9%), and the highest population prevalence of alcohol dependence (Greater Glasgow 9.0%, Scotland 7.7%)⁷. It also had the highest spend per population on substance misuse and the highest proportion of spend on dedicated alcohol services than the rest of Scotland. Access to alcohol treatment services for those dependent on alcohol was higher than anywhere else in Scotland, (Greater Glasgow 13.2%: Scotland 8.2%)⁷.

Figure 3. Average Number of Deaths by Deprivation Scotland

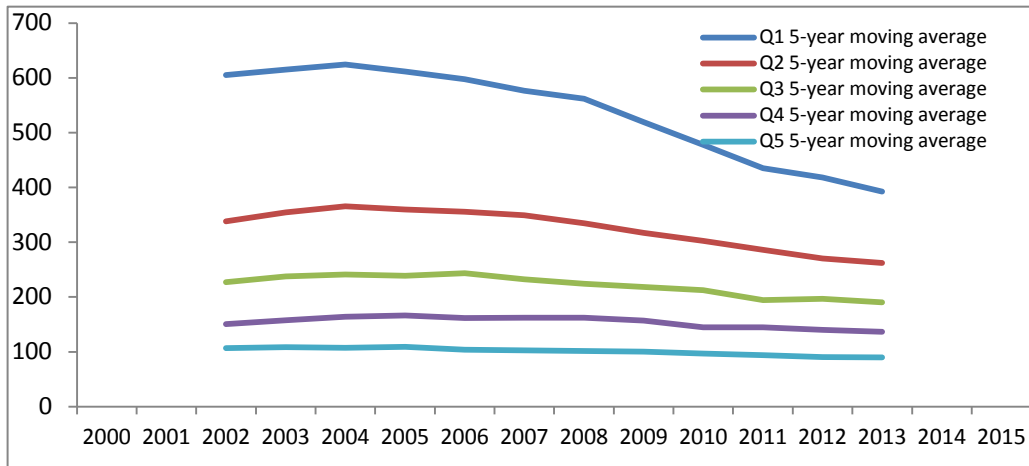
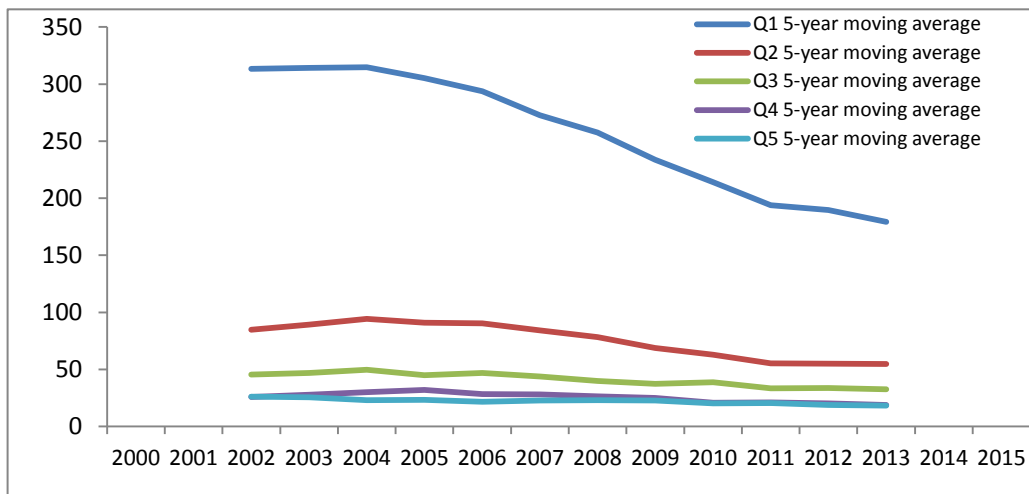


Figure 4. Average Number of Deaths by Deprivation NHS GGC



As part of the context for this audit an outline is provided of:-

Local service changes

National and wider factors

An outline of these factors is shown in Table 1.

Table 1 Local and National Factors Influencing Alcohol Related Health

Local	Year	National
Year Audited	2003	
Glasgow Addiction Service formed ⁸	2004	
Acute Addiction Liaison Service launched ⁹	2005	Licensing (Scotland) 2005 Act passed ¹⁰
Criminal Justice Arrest and Referral scheme developed	2006	
Attempt to address wider issues impacting on recovery; domestic abuse, mental health homelessness. ¹¹ Homelessness link workers commenced ¹¹ Liaison service for acute general psychiatry inpatients with comorbid substance misuse established ¹¹ ARBD service established ¹¹	2007	Licensing(Scotland) 2005 Act implemented: licensing policy, licensing fora, and off-sales alcohol restrictions
Services for women in criminal justice system developed ¹² Integrated service developed for patients with comorbid mental health problems (COMHLA) ¹²	2008 Global Recession Begins	
ABIs introduced in Primary care ¹³ Persistent Offender Project commenced ¹³ Acute Addiction Liaison Service commenced Alcohol Screening and Withdrawal Management pilot 2009 ¹³	2009	Policy: Changing Scotland's Relationship with Alcohol Launched ² Scottish Alcohol Needs Assessment ⁷ published key findings as stated above
ABIs introduced in A&E ¹⁴ Community rehabilitation teams assist users into training/education/employment ¹⁴	2010	

Study Design

Local Service Changes

Recommendations in the report of the 2003 audit included a range of measures to improve the co-ordination of care and follow up of patients. When the first audit was undertaken the old GGHB area comprised Glasgow city, East Dunbartonshire and parts of East Renfrewshire, West Dunbartonshire and North and South Lanarkshire. In 2006 parts of Argyll and Clyde Health board were merged with Greater Glasgow health board, but the delivery of services in the Clyde area of the health board differed from that which were provided in the old GGHB area. As this audit was undertaken to assess the impact of assertive attempts to help people in terminal decline in GGHB, the cohort examined was restricted to those who resided within its boundaries. The base population for the audit sample differs from NHS GGC population because the geographical area for audit purposes did not include the whole health board, whose boundaries have changed twice since 2003.

One of the recommendations of the 2003 audit was that a similar audit be repeated after a period of time to assess the impact of the action plan developed subsequent to the 2003 audit. This document is one of two examples of a repeat audit with a further audit already being completed for 2013. It is intended to produce a fourth document that reviews services changes and the impact that these changes have had on our population over time.

The sample was selected on the basis of the following criteria:-

Alcohol was the underlying cause of death or a contributory factor

The year of death was 2010

The individual resided in the 2003 definition of GGHB boundaries

The alcohol related codes used are shown in appendix A whether underlying or contributory cause.

This identified 401 individuals, 65 of whom were randomly selected using SPSS simple random sample with no stratification. We checked that this was a representative sample and was not skewed.

Table 2 Comparison of NHS GGC Alcohol Related Deaths and Sample Audited 2010

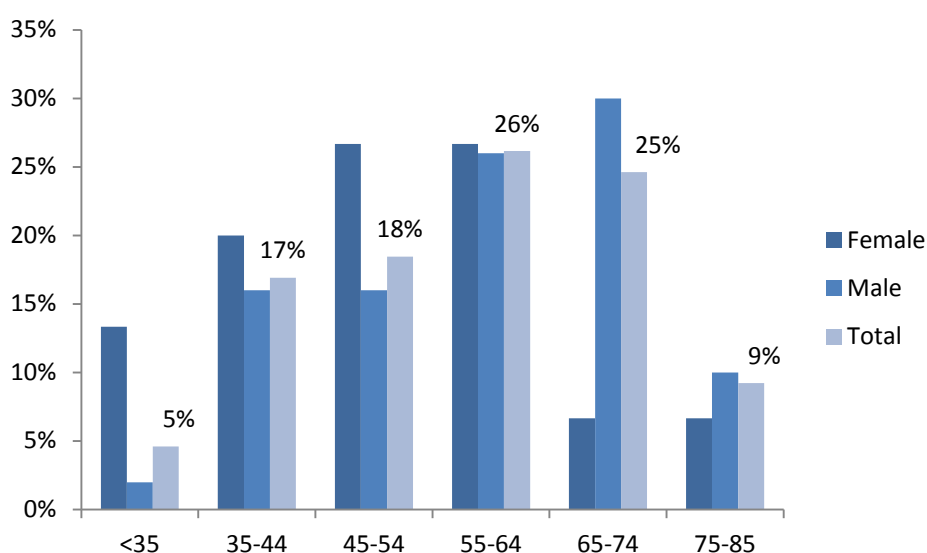
	Greater Glasgow Alcohol Deaths Only		Sample Audited	
Sex	Male 288	Female 113	Male 50	Female 15
Age at Death	57.2	52.8	59	48
Deprivation	64% resided in deprivation quintile 1		66% resided in deprivation quintile1	

Audit Findings

General Epidemiology

The random sample of 65 patients comprised 50 males 15 females. Most deaths occurred in the 55-64 year age group (26%) closely followed by the 65-74 year age group (25%). This pattern is reflected in national statistics. The median age of death was 58 years, (male 59, female 48). Figure 5 shows the % of the sample audited whom died in the age categories used for this study. Although the number of females audited and in the larger sample are smaller in number than the males, the % of males and females calculated separately shows that females show a trend for earlier age at death. The age distribution of age of death by sex is shown in the figure 5 below.

Figure 5. % of Cohort by Sex and Age at Death



The majority of the population were white Scottish (75%), 5% were other British and 2% were other. In the remainder of the sample (18%) the ethnicity was not recorded.

Most of our population was relatively deprived. The SIMD quintiles for the 2010 sample of 65 deaths are shown in Table 3. From the table it can be seen that none of the deceased resided in the most affluent areas.

Table 3 SIMD 2012 Quintile

SIMD2012 Quintile	Number of Cohort	% of 65
1	43	66%
2	13	20%
3	8	12%
4	1	2%
Total	65	100%

At the time of death 43% were single, 15% were married or in a civil partnership and a further 6% were cohabiting. Twelve percent was widowed. Of the remainder 14% were divorced/civil partnership dissolved and 5% were separated.

Primary Care, Alcohol Consumption and Alcohol Related Contacts

Alcohol consumption was recorded at time of registration with a general practice in 33 cases (51% of the cohort). A higher proportion of women had their alcohol consumption recorded as a new patient than men (60% : 48%). Alcohol advice was given at time of registration to 17% of the cohort (27% women, 14% men). In the majority of cases no advice was provided (67% female: 82% male). In a small proportion (5%) this information is not available.

Alcohol consumption was recorded in GP case notes in 98% of cases (100% of women and 98% of men). Alcohol consumption was not recorded in 2% of men).

The median alcohol consumption recorded in GP case notes was 168 units a week (range 13 units-1064 units). Alcohol consumption was noted to be a problem by the general practitioner in 98% of cases and not stated in 2% of cases. Alcohol advice was provided in 91% of cases. It was more likely to be provided for males than females (92% male, 87%

female). The median age at first alcohol related GP appointment was 38 years (36 female, 38 male). The median age at which alcohol related problems were first noted by the GP was 40 years (range 18-78 years). Therefore an average of two years occurred between first presentation with an alcohol problem and the GP noting problematic drinking in the case record.

When considering all contacts with health professionals, in 89% of cases (all women and 86% of men) the individual was advised to reduce or abstain from drinking.

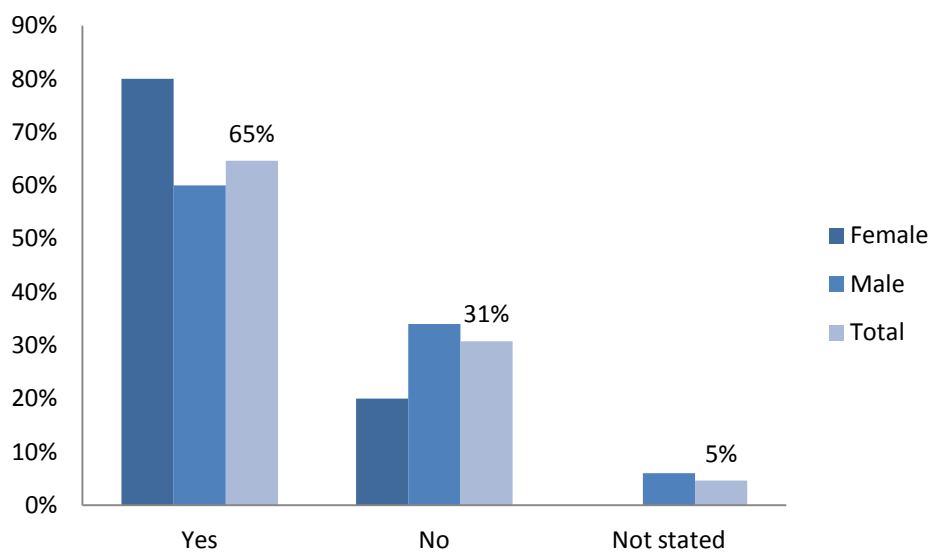
Attendance at appointment in primary care for alcohol related conditions was variable. Women were more likely to attend on first invitation, though when repeat appointments were sent, the proportion attending was 46% for both sexes. There were a group of patients in both sexes who do not appear to have been followed up in primary care. Attendance for appointments in primary care is shown in Table 4.

Table 4 Primary Care Attendance

GP	Female	% of 15	Male	% of 50	Total	% of 65
Attended all offered	5	33%	8	16%	13	20%
Defaulted some but repeat appointments sent or otherwise followed-up which were attended	2	13%	15	30%	17	26%
Defaulted some and no further appointment set	1	7%	2	4%	3	5%
None received	4	27%	10	20%	14	21%
Not stated	3	20%	15	30%	18	28%
Total	15	100%	50	100%	65	100%

The last contact with general practitioners was alcohol related in 65% of cases (more common in women than men). The last contact was not alcohol related in 31% of cases. In a small proportion of cases (5%) this was not stated. This is shown in figure 6.

Figure 6 Last Contact with GP



Alcohol brief interventions (ABI) were formally introduced as part of the HEAT targets in primary care in 2008, however, the first year was predominately focused on training health care workers to deliver brief interventions so smaller numbers were delivered in 2008 and 2009 when arguably the sample would have required far more intense support for alcohol problems. The case records showed that ABIs were delivered to 4 patients (2 males, 2 females) or 6% of the 65 in the sample. Table 5 shows the frequency in those who received an ABI.

Table 5 Delivery of ABI

Number of brief interventions used over the lifecourse	Female	% of 2	Male	% of 2	Total	% of 4
1	-	-	1	50%	1	25%
2	1	50%	1	50%	2	50%
3	1	50%		0%	1	25%
Total	2	100%	2	100%	4	100%

One male and one female are reported to have complied with a brief intervention.

Problematic Alcohol Use Based on Data from all Case Note Sources

An alcohol screening questionnaire was completed for 11 cases (17%) (4 females and 7 males) and was not completed in 80% of cases (10 females, 42 males) and not stated in 3% of cases (1 female, 1 male). In most cases the patient was screened only once (64%).

The median highest recorded alcohol consumption was 200 units (range 13-1064). This amount is over 30 units higher than that found using GP case notes alone. In 82% of cases the patient was recorded to be a regular daily drinker (female 87%, male 80%), in 3% of cases binge drinking was noted, and in 15% of cases the pattern of drinking was not documented. The category of drinking documented in the case notes was dependent drinking 60% (female 67%, male 50%), harmful drinking 18% (female 13%, male 20%), social drinking in 8% of cases (female 7%, male 8%) and intoxicated drinking in 2% (1 man). In 12% of cases the drinking pattern was not documented. Women were thus more likely to be regular daily drinkers and dependent drinkers.

Most of the cohort was first documented to have an alcohol problem between the ages of 25-34 years (29%). Women were more likely to have alcohol misuse recorded in the age groups 25-34, 35-44, and 45-54 years. The median age of problem drinking being noted was 37 years (female 34, males 38). This age is also lower than that identified through use of GP notes alone.

Seventy eight percent of the sample had physical evidence of alcohol dependence (male 80%, female 73%). It was not noted in 20% of cases (female 27%, male 18%) and not stated in 2%. Evidence of physical dependence was more likely to be recorded in males than females.

Evidence of alcohol related cognitive impairment was noted in 31% of patients (female 27%, male 32%), not noted in 65% (female 67%, male 64%) and not stated in 5%. It was more frequently reported in males than females though the difference was small.

Co-Morbid Health Issues

The 65 patients had 214 co-morbid health issues (when restricted to the 6 most relevant issues). Frequently more than 6 co-morbid health issues were mentioned. The conditions reported included a wide range of disorders. The most frequent co-morbid conditions were depression, hypertension and anxiety. The prevalence of the more common co-morbid conditions experienced by the cohort is shown in Table 6.

Table 6 Prevalence of Co-morbid Conditions in Sample Audited, Denominator 65

Co-morbid Condition	Prevalence in Cohort Audited %
Depression	29
Hypertension	27
Anxiety	23
Obesity	16
Gastritis	10
COPD	8
Fracture	8
Ischaemic Heart Disease	8

An examination of the medication prescribed to the sample revealed that a high proportion had been prescribed CNS medication at some point in time as shown in Table 7.

Table 7 Patients prescribed CNS Medication.

Medication	Total No	% of 65
CNS medication ever prescribed	47	72%
Anxiolytics -prescribed	37	57%
Hypnotics - prescribed	35	54%
Antidepressants – medical unsupported - prescribed	19	29%
Antidepressants & medical support in combination with psychological support - prescribed	12	18%
Anti psychotics - prescribed	8	12%

Of those prescribed CNS medication diazepam and chlordiazepoxide were most commonly used as shown in Table 8.

Table 8 Prescribed CNS Medication

CNS Medications	Total No	% of 65
Diazepam	28	43%
Chlordiazepoxide	26	40%
Citalopram	14	22%
Fluoxetine	10	15%

Family and Social Issues

Most (63%) of the cohort lived alone at time of death (53% of females and 66% of the males) and 31% of the cohort lacked a social network (female 40%, male 28%). Both sexes had a high prevalence of close family members with alcohol problems (female 33%, male 22%).

Housing problems were reported in 35% of the cohort (female 27%, male 38%), and 57% of those who reported housing problems had been referred (female 75%, male 57%). Housing problems could result for a range of reasons. Six percent of the cohort was currently homeless, and a further 17% were at risk of homelessness.

Most patients were living in their own home at time of death (78%). Females were twice as likely to be in either a hostel or residential /nursing home care as males (20%:10%). There was a small number in both sexes where the residence type was not stated.

Sixty five percent of the sample studied had evidence of self-neglect at some point in time during their life (unwashed, unkempt or malnourished). It was more likely to occur in women than men, (73%:62%).

Financial problems were reported by 17% of the cohort, (female 7%, male 20%), however referral for financial problems was uncommon. Only one man was referred. Financial issues could be due to spending their money on alcohol, however, in one case in our sample there was evidence that the individual was financially exploited and concerns were raised regarding this.

Neglect of children was only reported in two cases, both women. In one of the cases it is reported that the children were taken into care. Women were also more likely to be victims of domestic violence 33% compared to 4% of men, and only women were referred to services as a consequence of domestic violence. In contrast perpetration of domestic violence was proportionately similar in the both sexes, (female 7%, male 8%).

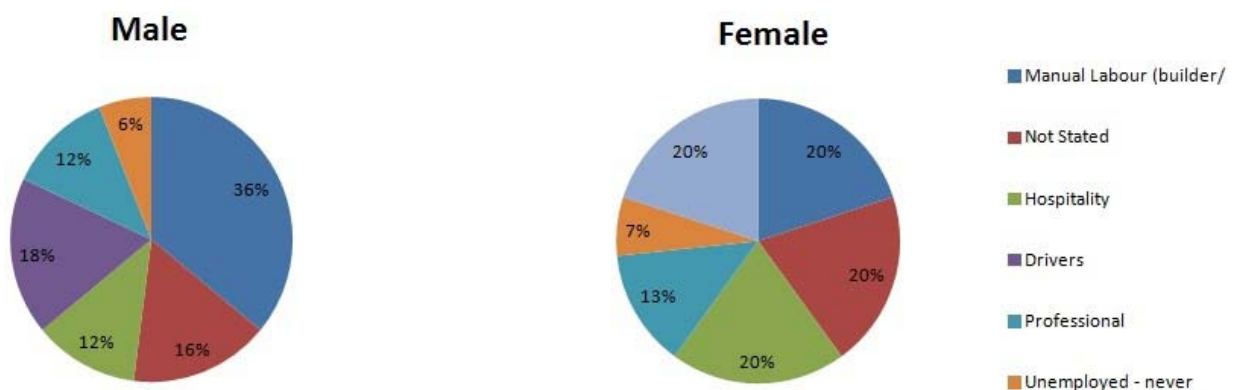
No females had a history of imprisonment in contrast to 8 (16%) of the men. Two of the 8 were referred to services for help with alcohol misuse as a result of their prison stay. Of those patients who had further information relating to their prison sentence, one was reported to have served a 6 month sentence for drunk driving and a 5 year ban and a second patient was imprisoned 12-15 times due to stealing to fund alcohol consumption.

Occupation and Opportunities for Employment

Most of the cohort seems to have worked at some point in their lives (female 73%, male 78%). Approximately equal proportions were in professions in both sexes. No females were drivers in contrast to 9 (18%) of the men, and no men were homemakers in contrast to 3 (20%) of the women.

A comparison of the employment in males and females is shown in the figure 7 below.

Figure7 Employment History of Sample Audited



Referral to Services for Alcohol Issues

Eighteen patients (28%) were referred for counselling from range of providers (6 female, 12 male). Overall 10 patients (56%) attended for at least one session of counselling. Women were more likely to attend than men (5/6: 5/12).

The medical notes recorded 27% of the sample were referred to non statutory service, such as AA or GCA and of those referred 22% attended (6/15 females, 8/50 males).

Twenty two percent (female 4, male 10) were referred to a specialist nurse for alcohol misuse. Of those referred, 43% attended (female 1, male 5).

One man was referred to the Community Mental Health Team.

Acute Addiction Liaison Service

Twenty three patients (35%) were referred to the acute addiction liaison service (females 5, male 18). 3 females (20%) and 13 males (26%) complied. There is no information about 1 woman and 3 men in relation to this service. The number of times an individual was referred to the Addiction Liaison Service was only once in the majority of cases (when considering the 23 individuals who were referred). Sixty one percent were referred once, 13% twice and 1 person (4%) was referred three times. In 5 cases, (17%) the number of times was not recorded.

Community Addiction Services

Patients can self refer to the community addiction service, but they may also be referred by their general practitioner, the acute addiction liaison service or any other service which has a concern. This service is multidisciplinary and comprises health professionals (doctors, nurses, occupational therapists, psychologists, dietitians,) and social work (addiction, with links to older peoples teams, criminal justice, children and families and mental health) The Community Addiction Team is a tier 3 service and acts as the gatekeeper for contact with tier 4 Addiction Psychiatry Service.

Thirty nine patients (60%) of the cohort were referred to the Community Addiction Team (female 12, male 27). Attendance was poor despite more assertive outreach. Attendance and follow up by the Community Addiction Team is shown in Table 9.

Table 9 Attendance and Follow Up by the Community Addiction Team

CAT	Female	% of 15	Male	% of 50	Total	% of 65
Attended all offered	-	-	4	8%	4	6%
Defaulted some but repeat appointments sent or otherwise followed-up which were attended		0%	6	12%	6	9%
Defaulted some and defaulted repeat appointments and all forms of follow-up leading to eventual loss of contact	1	6%	4	8%	5	8%
Defaulted some and no further appointment sent	3	20%	3	6%	6	9%
Declined	-	-	1	2%	1	2%
None received	4	27%	18	36%	22	34%
Not stated	7	47%	14	28%	21	32%
Total	15	100%	50	100%	65	100%

There appears to be a big drop off between the patients referred to the community addiction team and the number of patients who attend. It is also notable that there appears to be a lack of communication between primary care and the Community Addiction Team as in a sizable proportion of cases in both sexes there was lack of follow up information from the CAT in the records inspected.

The number of times patients attended the Community Addiction Team for an alcohol related issue ranged from 1 to 34 with a median of 3. One male accounted for the high number of attendances. All others attended on fewer than 10 occasions. The proportion of patients who never attended the CAT for an alcohol related issue was similarly high in both sexes and when combined with those for whom there was missing data was over 70%. These attendances occurred over a range of 1 to 32 years, with a median of 5. Number of years attendance at CAT is shown in table 10.

Table 10 Number of Years Attendance at CAT with Alcohol Issue

Number of years over which attendances spanned	Female	% of 15	Male	% of 50	Total	% of 65
1-10	6	40%	20	40%	26	40%
11-20	3	20%	4	8%	7	11%
21-30	-	-	5	10%	5	8%
31-40	1	7%	-	-	1	1%
None recorded	5	33%	21	42%	26	40%
Total	15	100%	50	100%	65	100%

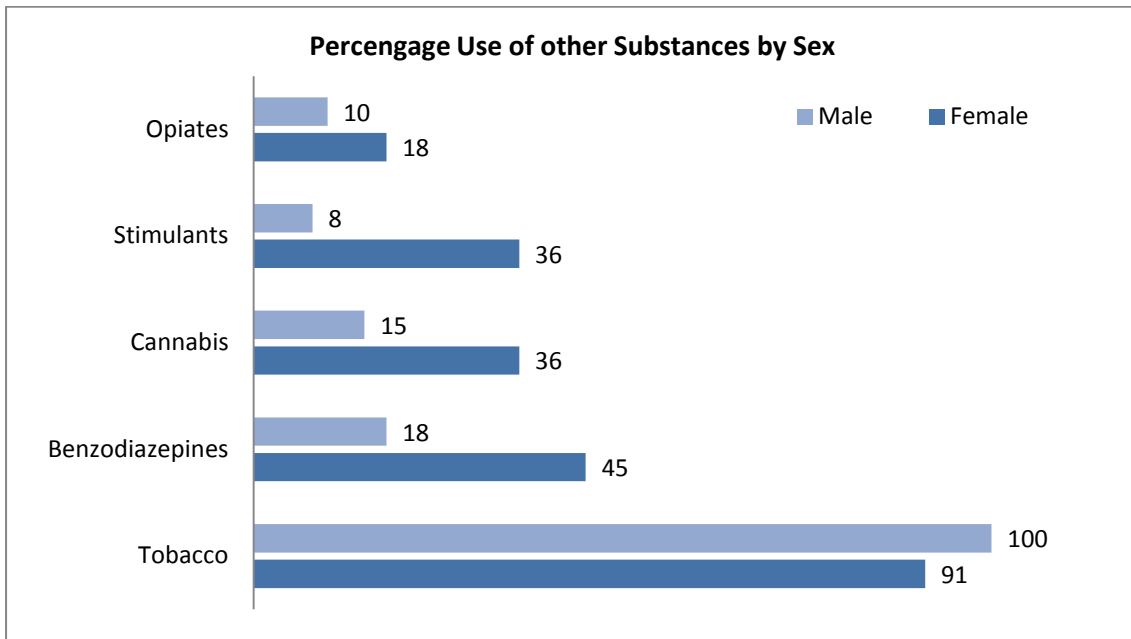
Clinical psychology may be accessed by the Community Addiction Team. Twelve patients (female 4, male 8) were referred to clinical psychology representing 18% (female 27%, male 16%). Three patients attended clinical psychology (female 2, male 1). Proportionately more females were both referred and attended the services.

Psychosocial interventions are reported for 11 patients (female 5 and male 6). Two female and 4 male are reported to have complied with the intervention.

Other Substances of Misuse

Other substances were misused by 77% of the sample (female 73%, male 78%). The most common other substance used was tobacco. Only one woman who used another substance did not use tobacco. All other substances were considerably less frequently used by both males and females. However, proportionately women were more likely to use benzodiazepines, opiates, stimulants and cannabis than men. No one in the sample used novel psychoactive substances. Other substance misuse by persons already using alcohol is shown in figure 8.

Figure 8. Other Substance Misuse by Sex of those Who Used Any

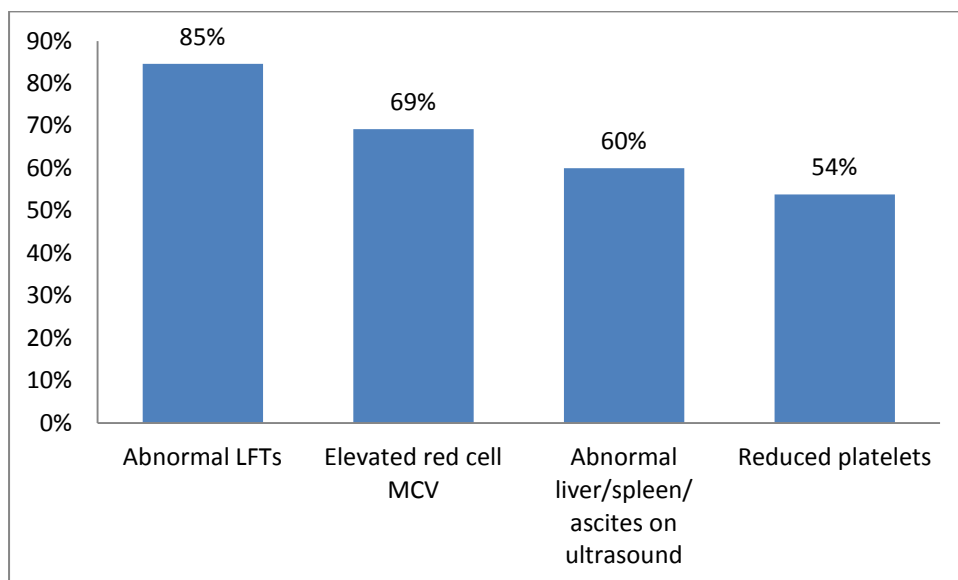


Acute General Hospital

Biomarkers of Alcohol Misuse

Biomarkers of alcohol misuse may have been identified by tests carried out in primary care, the community addiction team, addiction psychiatry or acute general hospital. Most patients were found to have abnormal biomarkers by more than one speciality. It is not surprising that these individuals are having such blood tests carried out given their identification of alcohol problems. Most of the group had more than one abnormality. Abnormalities in LFTs and reduced platelets were roughly similar in both sexes, however, abnormalities in liver and spleen were more common in men (64%:47%) and elevated MCV was more common in females than males (87%:64%). A summary of the frequency of abnormalities found in the whole sample is shown in figure 9. Again the high level of abnormalities is not surprising since this group of patients was mainly dying with known alcoholic liver disease.

Figure 9. Biomarkers of Problem Alcohol Use



Accident and Emergency Attendance

Sixty nine percent of the sample (female 67%, male 70%), attended accident and emergency departments at least once for an alcohol related condition. The number of attendances ranged from 1-34, median 4. Accident and Emergency was used by a number of these patients considerably earlier in the disease process than inpatient hospital admissions, with 33% of these visits taking place 10 or more years prior to death. Visits to the Emergency department are shown in Table 11.

Table 11 Emergency Department Visits for Alcohol Related Conditions

Number of years which these reports spanned	Female	% of 15	Male	% of 50	Total	% of 65
1-10	8	53%	28	56%	36	55%
11-20	4	27%	10	20%	14	22%
21-30	1	7%	3	6%	4	6%
31-40	-	-	3	6%	3	5%
<1 or Not stated	2	13%	6	12%	8	12%
Total	15	100%	50	100%	65	100%

Outpatients

In general, surprisingly small numbers received an acute outpatient appointment. Eleven percent overall attended all acute hospital outpatient appointments, while 40% of the sample did not receive any appointments. A summary of the attendance for acute general hospital appointments is shown in Table 12.

Table 12 Acute General Hospital Attendance – Check table

Acute outpatients - Appointments	Female	% of 15	Male	% of 50	Total	% of 65
Attended all offered	1	7%	6	12%	7	11%
Defaulted some but repeat appointments sent or otherwise followed-up which were attended	3	20%	7	14%	10	15%
Defaulted some and defaulted repeat appointments and all forms of follow-up leading to eventual loss of contact	-	-	2	4%	2	3%
Defaulted some and no further appointment sent	1	7%	3	6%	4	6%
None received	7	46%	19	38%	26	40%
Not stated	3	20%	13	26%	16	25%
Total	15	100%	50	100%	65	100%

The total number of acute outpatient appointments per patient in which alcohol was a factor varied enormously 1 to 60. Twenty three patients had no acute general hospital outpatient appointment recorded on their record. The distribution is thus highly skewed. The number of appointments offered is shown in Table 13. The most common outpatient diagnosis was alcohol related liver disease.

Table 13 Number of Acute General Hospital Outpatients

Total number of acute outpatients attendances in which alcohol was a factor	Female	% of 15	Male	% of 50	Total	% of 65
1-10	8	53%	20	40%	28	43%
11-20	-	-	10	20%	10	15%
21-30	1	7%	2	4%	3	5%
51-60	-	-	1	2%	1	2%
None recorded	6	40%	17	34%	23	35%
Total	15	100%	50	100%	65	100%

Inpatients

Most patients (89%) in our sample were admitted to an acute general hospital with an alcohol related condition at least once. Two females and 11 males (11% of the sample), had

no recorded admission. The range of years over which those admissions spanned was 1 to 39 years, with a median of 5.5 years. The number of inpatient admissions for alcohol related conditions is shown in Table 14.

Table 14 Number of Inpatient Admissions for Alcohol Related Conditions

Total number of inpatient admissions in which alcohol may have been a factor	Female	% of 15	Male	% of 50	Total	% of 65
1-5	10	66%	27	54%	37	56%
6-10	1	7%	8	16%	9	14%
11-15	1	7%	6	12%	7	11%
16-20	-	-	2	4%	2	3%
21-25	-	-	1	2%	1	2%
26-30	1	7%	1	2%	2	3%
None recorded	2	13%	5	10%	7	11%
Total	15	100%	50	100%	65	100%

Forty three percent of the sample (female 33%, male 46%) had a hospital admission for an alcohol related condition within 6 years of their death. The number of inpatient admissions is shown on Table 15.

Table 15 Years Prior to Death During which Inpatients Alcohol Related Admissions Spanned

Total number of years over which admissions spanned prior to death	Female	% of 15	Male	% of 50	Total	% of 65
1-5	5	33%	23	46%	28	43%
6-10	1	7%	9	18%	10	15%
11-15	3	20%	5	10%	8	12%
16-20	1	7%	3	6%	4	6%
21-25	-	-	1	2%	1	2%
26-30	-	-	3	6%	3	4%
31-35	-	-	1	2%	1	2%
36-40	-	-	1	2%	1	2%
<1 or Not stated	5	33%	4	8%	9	14%
Total	15	100%	50	100%	65	100%

The most common inpatient diagnosis was alcohol related liver disease, 10%. Other liver conditions included: ascites 4%, cirrhosis 3%, hepatitis 3%, haematemesis 3%, and encephalopathy, deranged LFTs and hyperaldosteronism were 1% each. There was a wide range of other conditions directly or indirectly related to alcohol misuse.

As liver damage is common in patients with significant alcohol use disorders, the management of other forms of liver damage including hepatitis C is important. It is therefore concerning that only 26% of the sample was offered a screening test for hepatitis C (female 3, male 14). Of those who were screened 1 female and 3 male were hepatitis C positive (24% of those tested).

Two patients, both males, were referred for assessment to the Edinburgh Liver Transplant Unit. One patient was considered suitable and received a transplant. In 88% of cases, the patients were not referred and in 9% of cases this was not stated.

Psychiatry

Forty patients (62%) were referred to psychiatric services for the treatment of mental illness and /or alcohol problems (female 12, male 28), 80% of the women and 56% of the men. The range of psychiatric services involved was wide. Approximately half of the psychiatric referrals were directly to addiction psychiatry. The type of psychiatric service referred to for the majority of care is shown in Table 16 below.

Table 16 Type of Psychiatric Service Attended for the Majority of Care

Psychiatric Speciality	Female	% of 12	Male	% of 28	Total	% of 40
Addiction psychiatry	6	50%	13	46%	19	48%
Liaison psychiatry	3	25%	6	22%	9	22%
Old age	1	8%	4	14%	5	13%
General adult	-	-	4	14%	4	10%
Other	1	8%	1	4%	2	5%
Not stated	1	9%	-	-	1	2%
Total	12	100%	28	100%	40	100%

Attendance at addiction psychiatry outpatients was low, so coupled with the low level of referral to addiction psychiatry few of the sample were able to benefit from this specialist addiction service. Attendance is shown in Table 17.

Table 17 Referral and Attendance to Addiction Psychiatry Outpatient Service

Addictions psychiatry	Female	% of 15	Male	% of 50	Total	% of 65
Attended all offered	1	7%	2	4%	3	5%
Defaulted some but repeat appointments sent or otherwise followed-up which were attended	1	7%	3	6%	4	6%
Defaulted some and defaulted repeat appointments and all forms of follow-up leading to eventual loss of contact	1	7%	3	6%	4	6%
Defaulted some and no further appointment set	5	33%	3	6%	8	12%
None received	5	33%	26	52%	31	48%
Not stated	2	13%	13	26%	15	23%
Total	15	100%	50	100%	65	100%

The number of appointments offered to patients by addiction psychiatry ranged from 1 to 33, with a median of 3. Twenty five percent of females and 26% of males referred to addiction psychiatry had up to 1-10 addiction psychiatry appointments. Only 2 patients had more than 10 appointments, 1 female, 1 male where alcohol was a factor.

Drink diaries were seldom used to monitor alcohol consumption, whether by addiction services or anywhere else.

In our sample only 4 of the 65 were offered a drink diary, (1 female, 3 male). Those who were offered a drink diary complied to provide a record of alcohol consumption. The proportion was similar in each sex.

Five females and 6 males were referred for alcohol day services (17%). In 82% of cases the individual was not referred, and in 1 case (a male) it is not stated. Of those who were referred 3 females and 5 males attended (12%). Proportionately, twice as many women as men attended alcohol day services (20%:10%).

Nine patients, 14% (female 3, male 6) attended residential alcohol rehabilitation services. 85% were not referred and in one instance it is not known. Almost double the proportion of women was referred for residential alcohol rehabilitation as men (20%:12%).

Medication Used in the Management of Alcohol Use Disorders

Fifty seven percent of the sample had ever been prescribed Pabrinex (female 53%, male 58%). For 43% of the sample there was no record of Pabrinex administration. Eighty five percent of the sample was prescribed thiamine (females 80%, males 86%). Forceval® was used less frequently at 29% of the sample (female 60%, male 20%).

Seventy two percent of the sample was ever prescribed medication relating to the central nervous system, (female 67%, male 74%). This includes medication to manage alcohol withdrawal such as chlordiazepoxide 40% or diazepam 43%, and a range of drugs for the management of depression, anxiety, sleep disorders, as well as anti-convulsants and anti-psychotics. The CNS medication used by the sample is summarised in Table 18.

Table 18 CNS Medication Prescribed to Sample

Drug Group	Female	% of 15	Male	% of 50	Total	% of 65
Hypnotics	9	60%	26	52%	35	54%
Anxiolytics	9	60%	28	56%	37	57%
Anti psychotics -	1	7%	7	14%	8	12%
Anti-Depressants with psychological support	5	33%	7	14%	12	18%
Anti Depressants Unsupported	4	27%	15	30%	19	29%

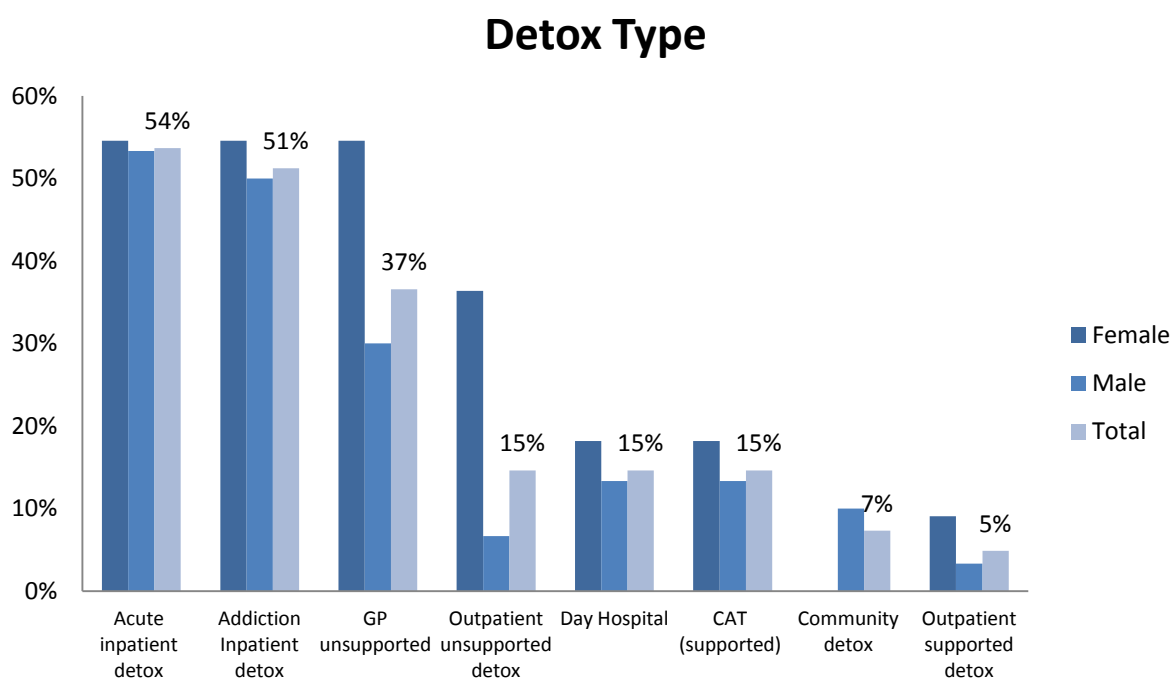
Compliance with prescription of CNS medication was reported to be greater than 50% on all classes of drug used. It was highest in anti-depressants at 75%, anxiolytics 65%, anti-psychotics at 63% and hypnotics and 57%.

Detoxification

Most of the sample underwent detoxification at some point during the course of their dependence (female 73%, and male 60%). Twenty nine percent of the sample had never undergone a detoxification at any time, 3 female and 16 male (20% and 32% respectively).

Of those patients who had undergone detoxification the most common setting overall was acute inpatient detoxification, though women were equally likely to undergo detoxification in addiction inpatients or as a GP unsupported detoxification. Men were more likely to undergo detoxification in a community setting. The type and setting for detoxification is shown in figure 10. Women were proportionately more likely to undergo detoxification than men.

Figure 10. Detoxification Type as a Percentage of Sex and Setting



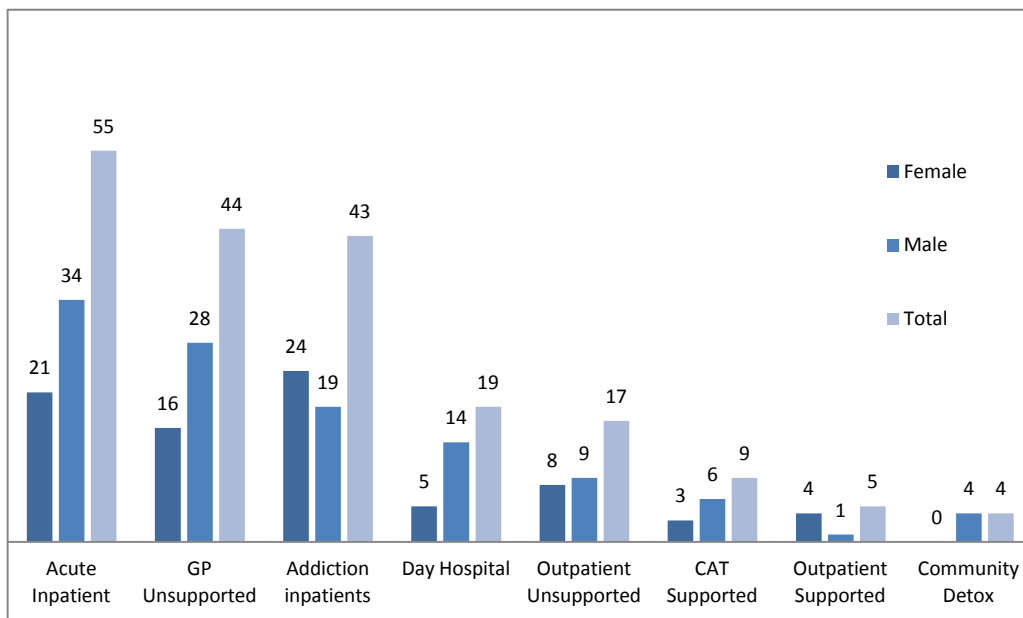
Many patients underwent detoxification on more than one occasion. The range of detoxifications per setting and the total number of detoxifications in each setting is shown in Table 19.

Table 19 Number of Detoxifications per Setting

Setting	Median	Maximum	Total
Acute Inpatient	2	6	78
Addiction Inpatient	1	8	43
GP Unsupported	2	12	44
Outpatient Unsupported	3	3	17
Day Hospital	3	7	23
CAT Supported	2	2	9
Community Detox	1	2	4
Outpatient Supported	3	4	5

The total number of detoxifications completed by the sample audited is shown in figure 11 below. It continues to show that the highest number of detoxifications have taken place in general acute inpatients, but GP unsupported detoxifications are more common than acute addiction inpatients. As the figures show the total number of detoxifications undertaken in given settings and not the percentage by sex the totals show that in most settings more men were detoxified than women, though proportionately more women were detoxified than men.

Figure 11. Total Number of Detoxifications Undertaken by Setting



Aversive Treatment and Relapse Prevention

Drugs specifically used to promote alcohol abstinence were rarely used in this sample of patients. Disulfiram was used in 8% of cases (female 1, male 4), Acamprosate was used in 5% of the sample (female 1, male 2) and there was no record of any patient receiving Naltrexone. Disulfiram use was supervised in 4 of the 5 cases and there is no record that any of the patients were abstinent from alcohol during the period of administration. Similarly, no patient was known to be abstinent while using Acamprosate. Only 1 person (2% of the sample) was on medication to reduce alcohol consumption at the time of death.

Day case relapse prevention services were offered to 8 patients (12% of the sample), 4 males and 4 females. Three females and 1 male attended (6% of the total sample or 50% of those referred to the service). Five patients were referred for residential relapse prevention (female 1, male 4). Four of the five referred attended the service (80% of those referred, or 6% of the whole sample).

Social Work Involvement

Interrogation of the CareFirst database revealed that 50 of the 65 patients had a social work file (77%). Sixteen people (25%) were open to the addiction team at time of death, of whom 13 were open for alcohol misuse (20%). Of those who were not open at the time of death a further 8 people (12%) had been open to the social work addiction team as some point in their lives all for alcohol misuse. This means that 68% of the people had not been in contact with the social work addiction team for alcohol misuse. There were twenty one people who were open to another social work team in the year of death as shown in table 20.

Table 20 Social Work Teams other than Addiction Engaged at Time of Death

Team	Number of Cases
Community Care	9
Home care/Cordia	7
Older People Physical Disability	5

A wide range of other teams were involved with those who had a social work file during their life span in addition to those involved in the last year of life. The frequency of other teams' involvement across the lifespan including the last year of life, excluding addiction social work for the management of alcohol misuse is shown in table 21. Some people were engaged with more than one team.

Table 21 Social Work Teams Across the Lifespan Including Last Year of Life, Excluding Social Work Addiction for Alcohol

Team	Number of Patients Receiving Support
Community Care	12
Older People / Physical Disability	10
Homecare/Cordia	9
Criminal Justice	8
Addiction Social Work Drug Misuse	3
Homelessness	3
Children and Families	2
Mental Health	1

The main reason for social work involvement with the client throughout life is shown in table 22.

Table 22 Main Reason for Social Work Contact Throughout Life

Team	Number of Cases
Addiction (Alcohol Misuse)	18
Physical Disability	11
Addiction (Drugs)	3
Criminal Justice	3
Frail Elderly	3
Vulnerable Adult	3
Homelessness	2
Dementia	1

From Table 22 it appears that the main social work team involved was the addiction team for alcohol misuse (28%), but for the remainder who were engaged with social work (40%) of the audited sample it was not the addiction team who were predominately involved. There was little involvement from the children and families team. Only 3 cases were recorded as having a child under the age of 16. The remainder either had adult children or no children.

All of the above information was extracted from the CareFirst record. It was not available from the primary care notes, which is concerning, as there was little information in the primary care notes for the GP who was responsible for co-ordinating care for the patients. There is no information on the involvement of social work in supporting these patients by the CAT, although a small number of primary care notes recorded that the patients was attending the CAT. The engagement of women with CAT was very poor, so it would appear that there is no systematic way of transferring information regarding the impact of the patient’s alcohol misuse and concerns leading to social work involvement to primary care.

Police, Prisons, Fire Service and Voluntary Agencies

Our audit sought to identify police contact with the patient prior to death being certified. The medical notes only identified a small number of such contacts as shown in Table 23.

Table 23 Police Contact within Three Years of Death from medical notes

Was there any contact with the police in the 3 years prior to death	Female	% of 15	Male	% of 50	Total	% of 65
Yes	3	20%	7	14%	10	15%
No	11	73%	35	70%	46	71%
Not stated	1	7%	8	16%	9	14%
Total	15	100%	50	100%	65	100%

The reasons for contact that could be ascertained were: found lying dead by police before death had been certified 2, brought to A&E by police 2, multiple contacts over many years 2. Two further cases had custodial sentences but police were not mentioned directly. The medical notes recorded some patients who had contact with the police outwith the three year time frame used for this audit.

CareFirst in contrast records much more detailed information on police involvement with the patients, though the time frame during which this contact occurred is not currently available. There was a wide range of reasons in free text and this was categorised for ease of comparison. A large proportion of this activity is directly related to the patient’s alcohol

consumption but was not mentioned in the medical notes, and would have been helpful for the primary care staff to know as far as patient care is concerned. This is shown in Table 24.

Table 24 Police contact with Patients from CareFirst.

Reasons for Contact with Police	Number of Cases
Criminal Justice Order	4
Absconded from Hospital while under Section	2
Arrested for own safety	2
Missing person	2
Abusive on medical facilities	2
Assault	2
Drunk and incapable	1
Drunk in charge of child	1
Driving while disqualified	1
Drunken behaviour	1
Breach of peace	1
In custody-Arrest Referral	1

One man was identified from the medical notes as having contact with the fire service in the three years prior to his death. He fell asleep while smoking, setting the carpet alight and was admitted with superficial burns and smoke inhalation.

CareFirst in contrast had two patients, one who set his home alight, and a further person whose home was assessed by the fire service as he was deemed to be at high risk of fires.

CareFirst recorded a higher referral rate to voluntary/non-statutory organisations predominately in relation to alcohol misuse. Apart from one case where the individual self-reported that they had attended, the remainder were not known to have complied with the referral. A wider range of organisations were found in the social work notes compared to the medical notes as outlined in section: Referral to services for Alcohol Issues. The referrals recorded in CareFirst are shown in Table 25. Some individuals were referred to more than one organisation, so the table shows number of referrals of which there were 18, and not number of patients.

Table 25 Referral to Voluntary Agencies Recorded on CareFirst

Agency	Numbers Referred
Addaction	5
Glasgow Council on Alcohol	3
Alcoholics Anonymous	3
Wayside Day Centre	2
CASS	1
Loretto Alcohol Outreach Project	1
Milestone	1
Rainbow House	1
Stress Centre	1

Cause of Death

The underlying cause of death obtained from death certificates for the sample whose case notes were audited is shown in appendix B. This shows the numbers of patients who had a particular cause of death mentioned and the percentage of males, females and the total number of times this was mentioned for the cohort audited. As more than one cause of death is included on death certificate and not all causes have been listed in this table there are more causes than cases. The most common category causing death was diseases of the liver 42 patients, (64%). Other common causes of death were diseases of the respiratory system 16 patients (25%), circulatory system 7 patients (11%) and a miscellaneous mixture of different conditions. Mental and behavioural cases were also frequently mentioned 22 patients (34%). Appendix C shows the cause of death of the 401 patients who resided in the area of the old Greater Glasgow Health Board. As in the smaller sample the most common cause of death was diseases of the liver at 47%. The second most common cause of death was circulatory diseases at 12% and respiratory disease at 6%. Mental and behavioural disorders were mentioned in 14% of cases, (22% female, 11% male). There were also a wide range of other miscellaneous causes as in the smaller sample. The main causes of death were similar in both groups.

Conclusions

We have analysed a small, randomly selected sample of the alcohol related deaths in 2010, but the 65 cases appear to be similar to the larger group of patients whose cause of death was alcohol related. The sample therefore appears representative.

Most deaths occurred in the 55-64 year age group, the majority were White Scottish and male, 43% of the sample was single. The vast majority lived in deprived circumstances, with 66% of patients living in the most deprived quintile, as defined in SIMD12, and had a long history of problematic alcohol misuse prior to death. Patients attended a wide range of services due to their alcohol misuse. Attendance at A&E and primary care often occurred for many years or decades prior to death.

In our sample alcohol use was recorded in about half of patients at time of registering with a GP and advice on alcohol use was only provided in 17% of cases. In our sample history of alcohol use and advice were more likely to be provided to women. There was on average a two year gap between patients attending primary care for an alcohol related problem and problem drinking being noted in the patients' record.

Therefore, identification of patients who have alcohol problems in primary care and A&E presents an opportunity to intervene at an early stage in the disease process, in contrast with acute inpatients or addiction psychiatry which was used by a smaller proportion of the patients once disease had become established.

Services Attended

This sample were not good at attending appointments in general, but were better at attending appointments in primary care than any other service. An overview of the range of appointments offered and subsequent attendance is shown in Table 26. Patients are both more likely to be offered appointments in primary care and also more likely to attend. This means that Primary Care has the greatest potential to influence the outcome of patients

and the skill with which GPs manage the care of these patients has huge consequences for potential outcome for good or ill.

Alcohol problems were noted and in most cases alcohol history was taken, but effective intervention to reduce alcohol misuse in primary care does not seem to have occurred. It is difficult to know whether GP attendance was due to poor motivation of patients to seek help from other sources due to the convenience of attending the GP. The apparent lack of GP intervention prior to 2010 most likely was due to GPs not having the time to spend in counselling these patients or the skills and knowledge to intervene. Alcohol brief interventions were only just being introduced at the end of the period under study and were not targeting the type of patients in our audit.

Table 26 Attendance at Different Specialities

	Acute outpatients - Appointments	Addictions psychiatry	GP	CAT
Attended all offered	11%	5%	20%	6%
Defaulted some but repeat appointments sent or otherwise followed-up which were attended	15%	6%	26%	9%
Defaulted some and defaulted repeat appointments and all forms of follow-up leading to eventual loss of contact	3%	6%	5%	8%
Defaulted some and no further appointment sent	6%	12%	-	9%
None received	40%	48%	21%	34%
Not stated	25%	23%	28%	32%
Declined	-	-	-	2%
	100%	100%	100%	100%

Gender Differences

Women presented with alcohol problems at a younger age than men and also died at an earlier age than men. There is no evidence that this is due to women not accessing services, in contrast women were more likely to undergo detoxification in a range of settings than men and were also more likely to be referred and attend counselling for alcohol issues and

be referred and attend non-statutory services. Another characteristic that stands out is the frequency of substance misuse other than alcohol which was more common in women than men. Women were more likely to lack a social network than men. Most of the cohort was living on their own at time of death, but women were more likely to be living in hostel or residential nursing care at time of death than men or to be living alone.

Women were more likely to experience domestic abuse than men, but both sexes were identified as perpetrators. Only women were recorded in relation to issues of child neglect.

Psychiatric Services

Both sexes had evidence of mental health issues with depression and anxiety being the most common. Attendance in primary care due to mental health issues was frequent.

This is also reflected in the fact that the main service used was not addiction service in over half of the patients who engaged with mental health services. Mental health issues are thus of concern for the population who misuse alcohol.

Employment and Social Problems

Most of the patients were gainfully employed in their early years and as alcohol misuse continued social isolation, employment issues as well as housing and financial problems arose. Men were more likely to end up in custody as a result of alcohol misuse, but those who did were the minority rather than the majority. Alcohol misuse leads to issues resulting in contacts with a range of services and we still do not have evidence that these contacts are being exploited fully to address alcohol consumption. Seventy seven percent of the cohort had a social work file and 32% of cases had ever been part of the case load of the addiction social work team for alcohol misuse. For 28% of the sample the main reason for contact

was addiction social work for alcohol misuse, while 40% contact with social work was for other reasons.

This audit has not provided information on the benefit of co-locating social work services and health services in the community addiction team. It appears that a significant proportion of the cases audited did have issues that the social work component of the CAT could have assisted with and perhaps did. There was very little information in the primary care records in relation to social work involvement for alcohol misuse or any other social work issues that may be directly related to alcohol misuse e.g. homelessness, child neglect or criminal justice. This would suggest that social work services are not communicating important information that may facilitate Primary Care intervention for the patient who is more likely to attend this service than any other.

Screening and Identification

Identification of alcohol misuse and advice to reduce alcohol misuse was generally given, but engagement with services such as the CAT and the acute addiction liaison service did not reach more than about 1/3 of this population. In most instances contact with the acute addiction liaison service was a single contact. The audit has not identified whether contact with the acute addiction liaison service has achieved its objective of increasing engagement with services or reducing alcohol misuse.

Half the sample was treated with Pabrinex at least once in their life and over 80% received thiamine. The use of medication post detoxification to reduce alcohol consumption was only seen in 13% of cases. Detoxification was more common in women than men. The most common setting was acute inpatients, probably an unplanned detoxification and possibly without adequate support and follow up beyond acute hospital care and the second most common setting was unsupported detoxification in primary care.

Both sexes have a proportion of cases (female 27%, male 18%) where the first contact with the CAT was more than 10 years prior to death. This represents an opportunity to intervene from an early point if engagement can be maintained.

Co-morbidity

This group of patients had many co-morbid health issues both physical and psychiatric (see Table 6 and preceding paragraph). Some of this is due to alcohol misuse, some due to other substance misuse, particularly tobacco, and some will be related to the relative deprivation which seems to be the norm for this population. Whether alcohol misuse is a cause or consequence of this is debatable. Certainly those who are relatively deprived are more likely to experience the harmful effects of over consumption, and therefore stable social support, housing and employment could contribute to improved health for many of their conditions.

The cause of death was more likely to be related to liver or respiratory disorders. Tobacco use was exceptionally common in this sample and consideration should be given to addressing this as part of the management plan for patients who attend with substance misuse.

Acute Services

Visits to the Emergency Department in relation to alcohol misuse often spanned many years, over 10 years in a third of the sample audited. It is thus an ideal opportunity for early identification and appropriate intervention.

Just over one quarter of the cohort attended acute services outpatient clinics for issues related to alcohol misuse (female 27%, male 26%). Only 11% of the cohort attended all appointments offered. Due to the much smaller number attending outpatients it is likely to have lower coverage in terms of contact with patients with alcohol misuse who would

benefit from intervention. There was an impression of patients attending more appointments towards the end of their lives after an episode of decompensated alcohol liver disease and better services for these patients addressing the underlying alcohol use disorder should be considered given that abstinence improves survival for this group.

Eighty nine percent of the sample was admitted for an alcohol related condition at least once, 57% in the 5 years prior to death. However there were a large number of alcohol related admissions in both sexes which occurred more than 5 years prior to death (female 34%, male 47%). An acute inpatient admission presents an opportunity if appropriate screening and advice is given at an early stage of the disease process.

We would recommend that medical and surgical teams take full advantage of the service provided by acute addiction liaison services which were established in 2005.

Recommendations

1. The 2010 audit has continued to reveal that those recorded as alcohol related deaths have had numerous points of contact with many services over many years most often without adequate intervention at the time. Our first recommendation is therefore that all staff should be able to deliver some form of minimal intervention at the point of contact and where the opportunity arises refer on to an appropriate service for more intensive intervention.
2. Given that the majority of these contacts were with the general practitioner and often referral on to other services was not fully taken up we would suggest that there is a group of patients who would benefit from GP based alcohol services.
3. All services need to consider what can be done to improve follow up of patients with alcohol use disorders so that intervention can prevent the development of irreversible conditions.
4. Further research should evaluate the benefit of social work in improving the delivery of health care, particularly in view of the fact that primary care records contain very little information if any on the management of the patient in the community addiction team.
5. Further effort needs to be put into training primary care staff in the identification and management of alcohol use disorders.
6. An integrated care pathway for those with alcohol liver disease that addresses the treatment of the underlying alcohol use disorder requires to be finalised.

7. A striking finding in this audit is the gender differences with women having a different mental health profile and alcohol disorder from men. Consideration should be given to clinical services being gender aware and enhancing service specifically for women particularly in view of the co-morbid mental health issues.

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Appendix A - ICD 10 Codes Used in 2003 and 2010 Audits

Diagnosis	ICD 10 Code
Alcoholic Liver Disease	K70
Mental Disorder due to Alcohol	F10
Cardiovascular Disease	I21-I73
Respiratory Disease	J13-J98
Neoplasms	C02-C85
Gastrointestinal Disease	K25-K65, K92
Falls	W10-W19
Fire and other External Factors	X00-X59
Septicaemia	A40-A41
Tuberculosis	A16
Renal and Urinary Disorders	N10-N39
Viral Hepatitis	B16-B17
Diabetes	E11-E14
Dementia	F01-F03

Appendix B - Causes of Death in 2010 Audited Sample

Causes of Death among 65 individuals who died from alcohol-related conditions by sex (2010)

ICD10	MAIN CAUSE OF DEATH	DEATHS		
		FEMALE %	MALE %	Total %
F100	Mental and behavioural disorders due to acute intoxication with alcohol	2 (13.3%)	2 (4%)	4 (6.2%)
F102	Mental and behavioural disorders due to alcohol dependence syndrome	3 (20%)	8 (16%)	11 (16.9%)
F106	Amnesiac syndrome due to use of alcohol	3 (20%)	1 (2.0%)	4 (6.2%)
F109	Mental and behavioural disorders due to use of alcohol unspecified	0 (0.0%)	3 (6.0%)	3 (4.6%)
G621	Alcoholic polyneuropathy	0 (0.0%)	1 (2.0%)	1 (1.5%)
K700	Alcoholic fatty liver	2 (13.3%)	7 (14.0%)	9 (13.8%)
K701	Alcoholic hepatitis	0 (0.0%)	2 (4.0%)	2 (3.1%)
K703	Alcoholic cirrhosis of liver	0 (0.0%)	4(8.0%)	4 (6.2%)
K704	Alcoholic hepatic failure	0 (0.0%)	1 (2.0%)	1 (1.5%)
K709	Alcoholic liver disease unspecified	5 (33.3%)	21 (42.2%)	26 (40.0%)
I219	Acute Myocardial Infarction Unspecified	-	5 (10%)	5 (7.7%)
I480	Paroxysmal atrial Fibrillation	-	1(2%)	1 (1.5%)
I517	Cardiomegaly	-	1(2%)	1(1.5%)
J122	Parainfluenza Virus Pneumonia	-	1 (2%)	1 (1.5%)
J180	Bronchopneumonia unspecified	1 (6.7%)	-	1(1.5%)
J189	Pneumonia unspecified	-	1 (2%)	1 (1.5%)
J219	Acute Bronchiolitis unspecified	-	1 (2%)	1 (1.5%)
J220	Unspecified acute lower respiratory tract infection	1 (6.7%)	-	1 (1.5%)
J420	Unspecified chronic bronchitis	-	1(2%)	1 (1.5%)
J449	Chronic obstructive pulmonary disease unspecified	-	1(2%)	1 (1.5%)
J690	Pneumonitis due to food and vomit	-	2(4%)	2 (3.1%)
C349	Malignant neoplasm bronchus or lung unspecified	1 (6.7%)	-	1 (1.5%)
K852	Alcohol induced pancreatitis	-	1(2%)	1 (1.5%)
M899	Disorder of bone unspecified	1 (6.7%)	-	1 (1.5%)
N390	Urinary tract infection, site not specified	1 (6.7%)	-	1 (1.5%)
W190	Unspecified fall: at home	2 (13.3%)	1 (2%)	3 (4.6%)
	Total	15	50	65

Appendix C - Main Causes of Death by sex where alcohol is among causes of death

All alcohol-related deaths in NHSGG area 2010 (n=401)

ICD10	MAIN CAUSE OF DEATH	SEX		Total
		FEMALE	MALE	
K70	Alcoholic Liver Disease	56 (49.6%)	134 (46.5%)	190 (47.4%)
F10	Mental Disorders Due to Alcohol	25 (22.1%)	31 (10.8%)	56 (14%)
I219 - I710	Circulatory Disease	8 (7.1%)	41 (14.2%)	49 (12.2%)
J180 - J988	Respiratory Diseases	8 (7.1%)	18 (6.25%)	26 (6.5%)
K00 to K93 (exc ALD & Alc Pancreatitis)	Digestive Diseases	4 (3.5%)	12 (4.2%)	16 (4.0%)
C02 - C85	Neoplasms	2 (1.8%)	13 (4.5%)	15 (3.7%)
A40 - A49	Septicaemia	2 (1.8%)	6 (2.1%)	8 (2.0%)
W10 - W19	Falls	3 (2.7%)	5 (1.7%)	8 (2.0%)
X11 - X59	External Causes (exposures)	0 (0%)	7 (2.4%)	7 (1.7%)
K85 to K862	Alcohol-induced pancreatitis	2 (1.8%)	2 (0.7%)	4 (1.0%)
N100	Renal Disease	0 (0%)	4 (1.4%)	4(1.0%)
F11	Mental Disorders Due to Drugs	1 (0.9%)	2 (0.7%)	3 (0.75%)
A490	Bacterial infection	0 (0%)	2 (0.7%)	2 (0.5%)
B18	Viral Hepatitis	0 (0%)	2 (0.7%)	2(0.5%)
G060, G312	Diseases of Nervous System	0 (0%)	2 (0.7%)	2 (0.5%)
E115	Non-insulin-dependent diabetes mellitus	0 (0%)	1 (0.35%)	1 (0.25%)
G403	Epilepsy	0 (0%)	1 (0.35%)	1 (0.25%)
L039	Cellulitis	0 (0%)	1 (0.35%)	1 (0.25%)
N390	UTI	1 (0.9%)	0 (0%)	1 (0.25%)
X400	Accidental Poisoning	0 (0%)	1 (0.35%)	1 (0.25%)
Y000	Assault	0 (0%)	1 (0.35%)	1 (0.25%)
D660, E039, M899	Other	1 (0.9%)	2 (0.7%)	3 (0.75%)
	Total	113	288	401

Appendix D - Data Collection Form

Name of Reviewer: _____

Alcohol Deaths Audit Data Collection Form

Please circle/delete or write entries as appropriate. The audit is based on documented evidence in casenotes; therefore if the information is not recorded in the notes, it should be entered as 'no'.

Record type: Acute

Psychiatric

GP

Social Work

Other, Please state

Patient's ID number: _____

GGHB location code or Carefirst Number: _____

Patient's CHI number: _____

Surname: _____

Forename: _____

Date of Birth: _____

Sex: Male / Female

Main Residence type:

- Home
- Residential/NH care
- Hostel
- Homeless
- Other

Full postal address: _____

Postcode: _____

Marital status:

Married / Civil Partnership

Cohabiting / Living with partner

Single / Never married

Widowed

Divorced / Civil partnership dissolved

Separated / Civil partnership separated

Refused

Ethnicity

		Please Tick
	White	
A	Scottish	
B	Other British	
C	Irish	
D	Gypsy/Traveller	
E	Polish	
F	Other White ethnic group, please specify	
	Mixed	
G	Any mixed or multiple ethnic background, please specify	
	Asian, Asian Scottish, or Asian British	
H	Indian, Indian Scottish or Indian British	
I	Pakistani, Pakistani Scottish or Pakistani British	
J	Bangladeshi, Bangladeshi Scottish or Bangladeshi British	
K	Chinese, Chinese Scottish or Chinese British	
L	Other, please specify	
	African	
M	African, African Scottish or African British	
O	Other, please specify	
	Caribbean or Black	
P	Caribbean, Caribbean Scottish or Caribbean British	
Q	Black, Black Scottish or Black British	
R	Other, please specify	
	Other Ethnic group	
S	Arab, Arab Scottish or Arab British	
T	Other, please specify	
U	Refused	

Last know occupation

Cause of death

1. What (if any) social work contact was made in the last 3 years prior to death.
None

2. Alcohol screening questionnaire completed: YES / NO

3. Number of times alcohol screening questionnaire used over lifecourse _____
Date alcohol screening questionnaire first used _____
Date alcohol screening questionnaire last used _____

4. Alcohol consumption recorded in casenotes ever: YES / NO
If yes – approx. no. of units per week (highest estimate) _____

5. Patient's pattern of drinking:
 - Not documented
 - Regular daily drinking
 - Binge drinking

6. Category of drinking documented in casenotes:
 - Not documented
 - Social (non-problem)
 - Harmful drinking
 - Dependent
 - Intoxicated

7. Age of patient when alcohol problem first noted (years): _____

8. Physical examination evidence of alcohol dependence: YES / NO

9. Alcohol-induced brain damage documented in casenotes: YES / NO

10. Abnormal LFTs YES / NO

11. Abnormal liver/spleen or ascites on ultrasound YES / NO

12. Elevated red cell MCV YES / NO

13. Reduced platelets YES / NO
14. Abnormal vitamin B12 level YES / NO
15. Evidence of self-neglect (unwashed, unkempt or malnourished) YES / NO
16. Advised by health professionals to reduce/abstain from drinking YES / NO
17. Drink diary to complete
- No
 - Yes, complied
 - Yes, did not comply
18. Referral to AA or Council on Alcohol/other non-statutory services
- No
 - Yes, attended
 - Yes, did not attend
19. Referral to specialist alcohol service (community addiction team)
- No
 - Yes, attended
 - Yes, did not attend
20. Referral to alcohol day services
- No
 - Yes, attended
 - Yes, did not attend
21. Referral to alcohol rehab residential services
- No
 - Yes, attended
 - Yes, did not attend

22. Referred to acute addiction liaison service
- No
 - Yes, complied
 - Yes, did not comply
 - Number of times referred to the addiction liaison service over the lifecourse _____
23. Referred to psychiatric services for treatment of mental illness and alcohol problem
- YES / NO
24. Type of psychiatric service attended for the majority of care:
- None
 - Substance misuse/addictions/drug and alcohol
 - Old age
 - General adult
 - Liaison psychiatry
 - Other
25. Brief interventions used by health professionals to reduce patient's drinking
- YES / NO
26. Number of brief interventions used over the lifecourse _____
27. Ever complied with a brief intervention YES / NO
28. Referred to clinical psychology YES / NO

29. Programme of psychosocial intervention used

- No
- Yes, complied
- Yes, did not comply

Appointments Service	None received	Attended all offered	Defaulted some and no further appointment set	Defaulted some but repeat appointments sent or otherwise followed-up which were attended	Defaulted some and defaulted repeat appointments and all forms of follow-up leading to eventual loss of contact with service	
Acute outpatients						
Addictions psychiatry						
GP						
CAT						

30. Total number of acute outpatients attendances in which alcohol was a factor:

31. Total number of addictions psychiatry attendances in which alcohol was a factor:

32. Hep C test completed YES / NO

Results of Hep C test Positive / Negative / PCR / Inconclusive

33. Total number of CAT attendances in which alcohol was a factor:

34. Enter the number of years over which attendances spanned: -

35. For **outpatients** list diagnosis for up to 6 of most relevant of these (e.g. first, last, longest and most common attendances): *ICD 10 codes will be applied later*

36. Total number of A&E reports in which alcohol may have been a factor:

37. Enter the number of years which these reports spanned:

38. Total number of inpatient admissions in which alcohol may have been a factor:

39. Enter the number of years over which these admissions spanned:

40. For **inpatients** list diagnosis for up to 6 of most relevant of these (e.g. first, last, longest and most common attendances). *ICD 10 codes will be applied later*

41. For **co-morbid** conditions list diagnosis for up to 6 of the most relevant of these. *ICD 10 codes will be applied later*

Ever prescribed thiamine YES / NO

42. Ever prescribed parenteral Pabrinex YES / NO

43. Ever prescribed disulfiram YES / NO

If yes – Supervised / Unsupervised

With adjunctive therapy / Without adjunctive therapy / Unknown

Abstinent while on treatment/Not abstinent/unknown

44. Ever prescribed naltrexone YES / NO

If yes - With adjunctive therapy / Without adjunctive therapy

Abstinent while on treatment / Not abstinent

45. Ever prescribed acamprosate YES / NO

If yes - With adjunctive therapy / Without adjunctive therapy

Abstinent while on treatment / Not abstinent

46. CNS medication ever prescribed YES / NO

47. List up to 6 CNS medication prescribed (excepting those listed above). Enter the BNF category (e.g. venlafaxine 04.03.04) that represents it.

48. On medication to reduce alcohol consumption at time of death: YES / NO

49. Detoxification ever: YES / NO

If yes – how many of each?

Inpatient detoxification

Outpatient supported detoxifications

Outpatient unsupported detoxifications

Day hospital

Community detox

CAT (supported)

GP unsupported

Acute inpatient detox

50. Patient referred to Edinburgh Liver Transplant Unit for assessment

- YES – patient attended, was assessed as suitable and received transplant

Date referred: _____ Date transplant: _____

- YES – patient attended, was assessed as suitable but did not receive transplant (for whatever reason including resuming alcohol or dying while on waiting list)

Date referred: _____

- YES – patient attended but was assessed as unsuitable (for whatever reason including poor compliance with medication/appointments or resuming alcohol)
Date referred: _____

- YES – but patient did not attend for assessment
Date of appointment: _____

- NO – for whatever reason including considered unsuitable because of poor compliance with medication/appointments or resuming alcohol

Please use the space below to write in any further information that you feel may be relevant.

51. Has the patient received a previous liver transplant YES / NO

If Yes – when _____

52. Total number of acute hospital inpatient stays (from discharge letters) (medical/surgical) in which alcohol may have been a factor:

53. Other substance misuse noted YES / NO

54. Type of substance misused

Tobacco YES / NO

Benzodiazepine YES / NO

Novel Psychoactive substance YES / NO

Opiates YES / NO

Stimulants YES / NO

Cannabis YES / NO

Other, please state _____

55. Advised by health professionals to reduce/abstain from drinking: YES / NO

TREATMENT

56. See below

Treatment	Prescribed (YES / NO)	Complied (YES / NO)
Forceval	YES / NO	YES / NO
Thiamine	YES / NO	YES / NO
Parenteral vitamins	YES / NO	YES / NO
Disulfiram	YES / NO	YES / NO
Acamprostate	YES / NO	YES / NO
Betablocker	YES / NO	YES / NO
Naltrexone	YES / NO	YES / NO
Hypnotics	YES / NO	YES / NO
Anxiolytics	YES / NO	YES / NO
Anti psychotics	YES / NO	YES / NO
Antidepressants & medical support in combination with psychological support	YES / NO	YES / NO
Antidepressants – Opioid Analgesics & medical support in combination with psychological support	YES / NO	YES / NO
Antidepressants – Anticonvulsants & medical support in combination with psychological support	YES / NO	YES / NO
Antidepressants – medical unsupported	YES / NO	YES / NO

57. On medication to reduce consumption at time of death: YES / NO / NOT KNOWN

58. Other services referred to:

Service	Referred (YES / NO)	Attended (YES / NO)
Counselling	YES / NO	YES / NO
Alcoholics Anonymous	YES / NO	YES / NO
Day case relapse prevention	YES / NO	YES / NO
Residential relapse prevention	YES / NO	YES / NO
Clinical psychology	YES / NO	YES / NO
CAT (community addiction team)	YES / NO	YES / NO

Specialist nurse	YES / NO	YES / NO
Addiction specific vol org	YES / NO	YES / NO
Detox service	YES / NO	YES / NO

59. SOCIAL ISSUES

Social issue	Present (YES / NO)	Referred (YES / NO)
Housing problems	YES / NO	YES / NO
Currently homeless	YES / NO	YES / NO
Risk of homeless	YES / NO	YES / NO
Perpetrator of domestic violence	YES / NO	YES / NO
Victim of domestic violence	YES / NO	YES / NO
Neglect of children	YES / NO	YES / NO
Criminal behaviour	YES / NO	YES / NO
Financial problems	YES / NO	YES / NO
Prison stay	YES / NO	YES / NO
Lack of social network	YES / NO	YES / NO
Close family member with alcohol problems	YES / NO	YES / NO
Lives alone	YES / NO	YES / NO

Please use the space below to write in any further information that you feel may be relevant.

60. GP registration (last GP if more than one) date:

61. Alcohol consumption recorded at time of registration: YES /
NO

62. Alcohol advice given at time of registration: YES /
NO

63. Date of first contact with GP in which alcohol may have been a factor:

64. Date of last contact with GP: _____

65. Last GP contact alcohol problem related: YES /
NO

66. Alcohol consumption recorded in GP casenotes ever:

YES / NO

If YES - approx. no. of units per week (highest estimate) _____

67. Was an alcohol problem noted by the GP:

YES / NO

If YES, age (years) at which noted _____

68. Alcohol advice given by GP ever (documented in casenotes) YES / NO

69. Total number of GP attendances in which alcohol may have been a factor:

70. GP List start date and diagnosis for up to 6 of the most relevant of these (e.g. first, last, longest and most common attendances)

POLICE/ FIRE / VOLUNTARY SERVICES

71. Was there any contact with the police in the 3 years prior to death?

YES / NO

If YES. please state

72. Was there any contact fire services in the 3 years prior to death?

YES / NO

If YES. please state

73. Was there any contact with voluntary agencies in the 3 years prior to death?

YES / NO

If YES. please state

Appendix E - Index of Tables

		Page
Table 1	Local and National Factors Influencing Alcohol Related Health	8
Table 2	Comparison of NHS GGC Alcohol Related Deaths and Sample Audited 2010	10
Table 3	SIMD 2012 Quintile	11
Table 4	Primary Care Attendance	12
Table 5	Delivery of ABI	13
Table 6	Prevalence of Co-Morbid Conditions in Sample Audited, Denominator 65	15
Table 7	Patients Prescribed CNS Medication	15
Table 8	Prescribed CNS Medication	16
Table 9	Attendance and Follow Up by the Community Addiction Team	19
Table 10	Number of Years Attendance at CAT with Alcohol Issue	20
Table 11	Emergency Department Visits for Alcohol Related Conditions	23
Table 12	Acute General Hospital Attendance	24
Table 13	Number of Acute General Hospital Outpatients	24
Table 14	Number of Inpatient Admissions for Alcohol Related Conditions	25
Table 15	Years Prior to Death During which Inpatients Alcohol Related Admissions Spanned	25
Table 16	Type of Psychiatric Service Attended for the Majority of Care	26
Table 17	Referral and Attendances to Addiction Psychiatry Outpatient Services	27
Table 18	CNS Medication Prescribed to Sample	28
Table 19	Number of Detoxifications per Setting	30
Table 20	Social Work Teams Other than Addiction Engaged at Time of Death	31
Table 21	Social Work Teams Previously Involved in Care	32
Table 22	Main Reason for Social Work Contact Throughout Life	32
Table 23	Police Contact within Three Years of Death from Medical Notes	33
Table 24	Police Contact with Patients from CareFirst	34
Table 25	Referral to Voluntary Agencies Recorded on CareFirst	35
Table 26	Attendance at Different Specialities	37

Appendix F - Index of Figures

		Page
Figure 1	Age Standardised Death Rate per 100,00 Male (European Standard Population)	5
Figure 2	Age Standardised Death Rate per 100,00 Female (European Standard Population)	5
Figure 3	Average Number of Deaths by Deprivation Scotland	7
Figure 4	Average number of Deaths by Deprivation NHS GGC	7
Figure 5	% of Cohort by Sex and Age at Death	10
Figure 6	Last Contact with GP	13
Figure 7	Employment History of Sample Audited	17
Figure 8	Other Substance Misuse by Sex of those Who Used Any	21
Figure 9	Biomarkers of Problem Alcohol Use	22
Figure 10	Detoxification Type as a Percentage of Sex and Setting 30	29
Figure 11	Total Number of Detoxifications Undertaken by Setting	30