



Scottish Alcohol Needs Assessment

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Foreword

Alcohol is a well recognised cause of mortality and morbidity in our communities, but also a means by which people enjoy themselves and socialise. Since 1999 in Scotland, under the devolved administrations, considerable recognition and resources have been given to measures aimed at reducing the harms associated with alcohol. But just how big are those harms? This piece of work gave us the opportunity to identify the size of the alcohol problem with which we are faced.

Perhaps not surprising in its findings for those working in the field, it indicates that many of us are drinking at levels that are causing or have potential to cause harm to our physical health, and too many of us suffer damage to our mental health through dependence on alcohol. Of those who need help for dependence, this work shows that the services available can only address the needs of 1 in 12 on average.

Since 2001 there has been significant investment of resources, and this year has seen an even bigger amount being invested in alcohol services than ever before. It remains to be seen what impact this will have on the sizeable proportion of the population that needs help to conquer its alcohol problem.

However, the first Scottish national needs assessment provides us with an excellent baseline from which we now need to move to increase the availability of services and reduce the number of people whose needs are not being met.

Maggie Watts
Chairperson
Scottish Association of Alcohol and Drug Action Teams
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Executive summary

Background

1. Alcohol consumption and related harm is increasing in Scotland, compared to falling trends seen in many other European countries. The treatment of alcohol problems has been identified as a high priority for the Scottish Government. There is however a lack of reliable information on the extent to which specialist alcohol treatment services in Scotland currently meet the level of need for treatment.
2. This study was commissioned by the Scottish Association of Alcohol and Drug Action Teams (SAADAT) and funded by the Scottish Government to assess the level of need specialist alcohol treatment and to chart service capacity in Scotland. It was conducted by Figure 8 Consultancy Services Ltd. in collaboration with the National Addiction Centre, Institute of Psychiatry, King's College London.
3. This report details the methods and results of the first national alcohol needs assessment for Scotland, and describes the range of services available for the treatment of alcohol problems in Scotland. The findings are critically reviewed and compared with a recent report from Audit Scotland (Audit Scotland, 2009) on the provision of drug and alcohol services. Additional research on general practitioners conducted as part of this work is provided in a separate report.
4. Alcohol use disorders have been classified for the purpose of this study in terms of the World Health Organisation's International Classification of Mental Disorders (10th Revision; 1992). Within this system Alcohol Use Disorders (AUDs) are classified into three categories: Hazardous Alcohol Use, Harmful Alcohol Use, and Alcohol Dependence. These can be viewed as increasing levels of risk and harm associated with alcohol consumption. Drinkers not meeting the criteria for an AUD have been described variously as 'sensible drinkers' or 'low risk' drinkers.
5. In this needs assessment we are concerned with only alcohol dependence being the group most in need of specialist alcohol treatment. However, the justification for this is described more fully in the body of the report.
6. Specialist treatment is defined in this report as publicly funded treatment interventions for alcohol problems delivered by statutory and non-statutory and independent providers in Scotland.

Methods

7. The main methodology for this study is that of 'needs assessment' which aims to estimate the gap between the number of people in the population in need of specialist treatment and the number who actually access treatment. The methodological issues in conducting needs assessment are discussed more fully in the report.

8. The methods used in this study closely follow the methodology used in the Alcohol Needs Assessment Research Project in England (ANARP, Drummond *et al*, 2005).
9. The gap between need and access to treatment is defined as the Prevalence-Service Utilisation Ratio. The utility of this ratio is greater for the relative level of access comparing different countries and areas rather than the absolute level of access in a particular area.
10. The estimate of need in this study was based on combined data from two surveys (Scottish Health Survey [SHeS], 2003; Psychiatric Morbidity Survey [PMS], 2000). A composite measure of need from the two surveys was required because no 'ideal' survey of alcohol need was available.
11. The overall prevalence of need in Scotland was derived from the PMS, based on the Alcohol Use Disorders Identification Test (AUDIT) score of ≥ 16 , representing 'alcohol dependence'. The PMS sample size was too small to allow regional comparisons within Scotland. As the SHeS had a larger sample size than the PMS, the relative prevalence of 'problematic drinking' estimated by a 6 item version of the CAGE questionnaire was used in this study to compare prevalence in different areas in Scotland using an adjustment for overall prevalence from PMS. The final estimates are therefore comparable with the ANARP study in England. Due to sample size limitations, it was not possible for the Health Analytical Services Division of the Scottish Government to produce dependence estimates for individual Health Boards. Estimates are provided for groups of Health Boards to allow for regional comparisons to be made.
12. Access to specialist alcohol treatment was estimated using a survey method. All specialist alcohol agencies in Scotland providing Tier 2-4 interventions (MOCAM; National Treatment Agency for Substance Misuse, 2006) were mapped. All agencies were surveyed using a standard postal survey tool, which included estimates of the number of alcohol patients who were offered an alcohol intervention during the 2006/2007 financial year. This was supplemented by a telephone interview with non-responders.
13. The agency survey yielded a response from 82 out of 97 agencies (84.5%) which was much higher than the ANARP survey (55.7%).

Key Results

14. The prevalence of hazardous/harmful alcohol use based on the most recent Scottish Health Survey was 27.9% and the prevalence of alcohol dependence based on the Psychiatric Morbidity Survey was 4.9% in adults over age 16 years in Scotland overall, indicating approximately 1,172,200 and 206,000 people affected respectively. Males had a higher prevalence rate of hazardous/harmful drinking compared to females (33.4% versus 23.0%).
15. There was variation in the estimated level of hazardous/harmful drinking in Scotland by NHS Board area grouping (range: 25.2% - 31.7%). Greater Glasgow had the highest prevalence of hazardous/harmful drinking and Highlands and Islands the lowest.
16. Males had approximately twice the prevalence of alcohol dependence compared to females (6.7% versus 3.3%). This is a lower male:female ratio (2:1) than in England (3.4:1). The prevalence of male alcohol dependence is similar in Scotland and England (6.7% versus 5.8%) but the female prevalence is approximately double in Scotland compared to England (3.3% versus 1.7%). The higher prevalence rate overall for alcohol dependence is therefore largely accounted for by the higher prevalence in women.

17. The prevalence of alcohol dependence varied from 4.3% in Grampian and Tayside to 6.1% in Greater Glasgow.
18. The estimated number of people accessing alcohol treatment per annum in 2006/07 was approximately 17,000, taking account of referrals between agencies and the non-response rate from agencies.
19. The Prevalence-Service Utilisation Ratio (PSUR) (the ratio of the number of people accessing treatment to the number in the population with alcohol dependence) was 1:12.1 for Scotland as a whole. This represents 8.2% of the in-need population accessing treatment per annum.
20. The PSUR varied from 1:7.6 in Greater Glasgow to 1:18.3 in the Highlands and Islands. A lower ratio indicates greater access to treatment, i.e. a greater proportion of the in need population is able to access treatment in Greater Glasgow compared to other areas in Scotland. Males and females had approximately equal access, taking account of differences in population prevalence (1:12.8 versus 1:11.8). The finding of better access in Greater Glasgow was consistent with the Audit Scotland finding that Greater Glasgow and Clyde has the highest spend per population on Substance Misuse and the highest proportion of spend on dedicated alcohol services.
21. The PSUR was lower in Scotland compared to England (1:12.1 versus 1:18), indicating a higher level of access to treatment in Scotland.
22. Ninety seven services were identified in Scotland as providing specialist alcohol interventions of which 10 (10.3%) were residential agencies and the remainder were community-based. The majority provided services for both drug and alcohol misusers (59.4%), and 37.5% provided exclusively alcohol services. Most of the agencies were either non-statutory (48.4%) or statutory (NHS) (46.9%), with 4.7% provided by private institutions.
23. The estimated total whole time equivalent staff working in alcohol services in Scotland was 632. From the services survey, the estimated annual budget for alcohol services in Scotland was £61 million. The Audit Scotland study which used a different methodology by surveying commissioners estimated a budget of £30 million for alcohol only services and £59 million for joint drug and alcohol services.
24. The majority of service users were reported to be moderately or severely alcohol dependent. Over one third (35.1%) were referred to community alcohol services by their GP/primary care, 17.7% were self referrals. In the case of residential services, 40.9% of patients were referred by other specialist community (NHS) alcohol services. The average waiting time for treatment access was 3.5 weeks (3.3 and 3.8 for community and residential agencies respectively). In the community sector, the shortest average wait was observed in the Grampian and Tayside NHS Board area grouping (1.8 weeks) and the longest wait was in the Lothian, Fife and Borders NHS Board area grouping (6.3 weeks).
25. There were significant gaps in the information which services were able to provide on their clients, for instance, on the number who were alcohol dependent. This finding was replicated by Audit Scotland.
26. The most common interventions provided by community alcohol agencies were advice, brief interventions, and structured psychological interventions, whilst residential services provided a more limited range of interventions.
27. The limitations of the study are considered in the body of the report.

Key conclusions

28. Compared with England, Scotland has a 48% higher level of access to specialist alcohol treatment. However, none of the Scottish areas achieved even a 'medium' level of access to treatment by North American standards (i.e. 15%), although Greater Glasgow came close to this level (13.2%). All other areas had levels of access below that deemed 'low' by American standards (1 in 10). All Scottish area groupings performed better than the lowest 4 (of 9) English regions in terms of level of access.
29. We recommend that commissioners consider increasing access to treatment for those with alcohol dependence in all parts of Scotland, with an initial target of achieving a medium level of access of 15%. Priority should be given to those areas with the lowest access.
30. In designing future national surveys to estimate the prevalence of alcohol dependence in Scotland, the Scottish Government should consider including standardised diagnostic or screening tools such as the World Health Organisation's Composite International Diagnostic Interview or Alcohol Use Disorders Identification Test. Also methods of estimating 'natural remission' and potential demand for treatment should be considered in designing future surveys.

Chapter one: Background

Alcohol consumption and related harm is rising in the UK, in contrast to the falling trends seen in many other European countries, notably in relation to deaths from liver cirrhosis (Leon & McCambridge, 2006). In Scotland, it is rising much more steeply than the other countries in the UK. It is widely recognised that only a small proportion of those who need specialist alcohol services access them (Rush 1990). The Alcohol Needs Assessment Research Project (ANARP; Drummond *et al*, 2005), conducted in England in 2005, showed that on average 1 in 18 people with alcohol dependence access specialist alcohol treatment per annum.

The treatment of alcohol problems has been identified as a high priority by the Scottish Government, and 'Changing Scotland's Relationship with Alcohol: A Framework for Action', published in March 2009, lays out a range of actions to reduce alcohol-related harm. This level of priority is evidenced by the recent additional allocation of £85 million over the next three years, beginning with £25 million in 2008/09. The Scottish Government has determined that the first priority for this funding will be to establish brief interventions, and targets for these have been set as part of the performance management arrangements (HEAT Targets) for NHS Boards. These targets state that each NHS Board must achieve an agreed number of screenings using the setting-appropriate screening tool and appropriate alcohol brief intervention, in line with the SIGN 74 guideline by 2010/11 (Scottish Government, 2009). The HEAT target guidance recognises that screening and brief intervention will identify currently unmet need for treatment of more severe alcohol problems, including dependence, and NHS Boards and partners are expected to plan services to meet this need.

There was however a lack of reliable information on the extent to which specialist alcohol treatment services in Scotland currently meet the level of need for treatment. The ANARP study, which was an alcohol needs assessment conducted in 2005, only examined England (Drummond *et al*, 2005). Therefore a key requirement of the Scottish Government was to conduct a comparable alcohol needs assessment to guide rational planning of specialist service development.

This study was commissioned by the Scottish Association of Alcohol and Drug Action Teams (SAADAT) and funded by the Scottish Government. It was conducted by Figure 8 Consultancy Services Ltd. in collaboration with the National Addiction Centre, Institute of Psychiatry, King's College London. In addition, the Health Analytical Services Division of the Scottish Government provided data on the prevalence of alcohol use disorders in Scotland.

This report will examine the methods for conducting alcohol needs assessment including their strengths and weaknesses. The report will then detail the methods and results of the first national alcohol needs assessment for Scotland, and describe the range of services available for the treatment of alcohol problems in Scotland. The findings will be critically reviewed and compared with a recent report from Audit Scotland (2009) on the provision of drug and alcohol services. Additional research on general practitioners conducted as part of this work is the subject of a separate report.

Alcohol Use Disorders

The majority of adults in Scotland consume alcohol and many do so without experiencing adverse effects. However, a growing number of the population consumes alcohol at a level that currently affects their health or wellbeing or the lives of others, and a further group is drinking at a level that is not currently causing such problems, but is at increased risk of doing so in the future.

The risk of harm from alcohol consumption has been studied in detail. There is a clear correlation between increasing levels of alcohol consumption per drinking occasion, per week, per annum, or per lifetime and a range of health, social and psychological adverse consequences. Further the greater the amount of alcohol consumed by a population, the greater the adverse consequences. In Scotland, the increasing mortality rate from and admissions to hospital for alcohol-attributable health conditions is rising as per capita alcohol consumption increases. Rising consumption is strongly influenced by increasing affordability and availability of alcohol (Babor *et al*, 2003).

However, the relationship between consumption and harm is complex. For some health conditions (e.g. the risk of breast cancer), the increase in risk of harm is approximately linear and even low levels of alcohol consumption have an increased risk compared to abstaining. For other conditions (e.g. alcoholic liver disease), the risk is curvilinear, with the risk of disease increasing steeply with increasing alcohol consumption. In other cases (e.g. heart disease) there may be a small protective effect of moderate amounts of alcohol, such that moderate consumers are at lower risk than abstainers. However, this protective effect is likely to have been overestimated (Ofori-Adjei, Cassewell, Drummond *et al*, 2007). The Information Services Division of National Health Services Scotland has recently published a report on alcohol attributable morbidity and mortality in Scotland which explores these issues in greater depth (National Health Services Scotland, 2009)

Risks related to drinking can also be contextual. For example, consumption of any alcohol before driving a vehicle or operating machinery can be particularly hazardous. Consumption of any alcohol in pregnancy may be harmful. Therefore, overall it is difficult to recommend a level of alcohol consumption which is universally without risk for all individuals.

The UK Government currently recommends that men should not regularly drink more than 3-4 units (one unit = 8g of pure alcohol) a day, and women should not regularly drink more than 2-3 units a day. Drinking below these levels is considered to represent a low level of risk. Guidance from the UK Royal Colleges suggests consumption of no more than 21 units in men or 14 units in women per week. Further, current UK Government guidance on drinking in pregnancy is to abstain.

There are many ways in which the impact of alcohol use can be defined. A helpful way of categorizing use of alcohol for the purpose of assessing the level of need for treatment is that applied by the World Health Organisation's International Classification of Mental Disorders (10th Revision; 1992). Within this system Alcohol Use Disorders (AUDs) are classified into three categories: Hazardous Alcohol Use, Harmful Alcohol Use and Alcohol Dependence. These can be viewed as increasing levels of risk and harm associated with alcohol consumption. Drinkers not meeting the criteria for an AUD have been described variously as 'sensible drinkers' or 'low risk' drinkers.

Hazardous alcohol use: this is defined as drinking above a level that may cause harm in the future, but is not currently causing clear evidence of harm. Any alcohol consumption can lead to harm; however, for practical purposes the current Government/Royal Colleges' guidance of not exceeding four units per day or 21 units per week in adult men or three and 14 units respectively in women provides a means of defining a relatively low risk group. The guidance for children and adolescents under the age of 18 is currently being developed.

Harmful alcohol use: this is defined as drinking at a level that is leading to current evidence of physical, social or psychological harm. Clearly this category includes a wide range of problems and exists on a wide spectrum of severity, from alcohol-related injuries through to life threatening chronic alcoholic liver disease, or absenteeism after an isolated drinking binge through to job loss.

Alcohol dependence: this is defined within the World Health Organisation's International Classification of Diseases 10th Revision (ICD-10; World Health Organisation, 1992) as the individual having three or more of a range of symptoms of alcohol dependence including: tolerance, alcohol withdrawal, craving, relief of withdrawal, neglect of alternative pleasures, and persistence of drinking despite negative consequences.

It is important to note that while these categories of AUD are presented within ICD-10 as being exclusive, in reality, harms related to drinking and alcohol dependence each exist on a continuum of severity with no clearcut points at which they can be said to be absent or present, moderate or severe.

Levels of Interventions for Alcohol Use Disorders

A wide range of interventions of different intensity have been developed and researched to respond to the wide range of alcohol use disorders and risks.

Population Approaches

These include regulating price, availability and promotions, raising public awareness, improving enforcement and supporting families. Many of these measures are included in the Scottish Government framework.

Individually-Based Approaches

A useful way of conceptualising alcohol interventions for individuals is laid out in a recent Department of Health review of the evidence for the effectiveness of alcohol problems (Raistrick et al, 2006).

In general terms, less severe AUDs are likely to respond to less intensive interventions and more severe AUDs will require more intensive interventions. However, this is not a hard and fast rule: some people with more severe alcohol dependence will respond to less intensive interventions, and indeed many recover without any formal intervention. Equally some harmful drinkers will require more intensive interventions, including specialist treatment. Nevertheless, the scheme described by Raistrick et al is a useful starting point to describe interventions and the target group for whom they are largely intended.

Interventions can be broadly grouped into 3 categories:

- Health information,
- Opportunistic screening and brief interventions, and
- Specialist alcohol treatment.

Health information: this is information provided through a variety of media (leaflets, posters, information booklets, media campaigns, websites), which contain information on the effects of alcohol and the risks and harms associated with various levels of alcohol consumption. General guidance may be provided on ways to reduce or stop drinking. This is largely intended for use by current low risk drinkers as a means of preventing hazardous drinking, and current hazardous drinkers who may be unaware of the risks that their drinking poses. However, it is possible that harmful and dependent drinkers can also benefit from this information, although the impact is likely to be less in dependent drinkers than with other drinking groups.

Opportunistic screening and brief interventions (SBI): this refers to the use of screening or case identification tools (such as the AUDIT questionnaire) applied opportunistically in non-specialist settings (e.g. primary care, A&E departments, maternity services, criminal justice agencies) followed by a brief intervention usually delivered by a non-specialist health or social care professional. Interventions delivered in this context can vary from five minutes of structured advice, to an extended brief intervention of 20 to 40 minutes involving motivational principles. SBI is largely intended for hazardous and harmful drinkers who are not seeking help for an AUD. The evidence suggests that for this population SBI is an effective intervention with some evidence of cost effectiveness.

Specialist alcohol treatment: this refers to a wide range and intensity of interventions from, for example, one or more sessions of Motivational Enhancement Therapy through to intensive residential rehabilitation lasting up to 12 months. What these interventions have in common is that they are provided for patients actively seeking help for an AUD, and the interventions are provided by specialist staff trained to provide them. Specialist treatment is primarily targeted at people with alcohol dependence, and the more intensive forms (e.g. inpatient or residential treatment) are generally reserved for people with more severe alcohol dependence and/or significant psychiatric comorbidities or social problems. As noted above, both alcohol-related harm and dependence exist on a continuum of severity and, although they are categorised within ICD-10, the precise point at which dependence or harm reach a threshold requiring a specialist intervention is, in practice, difficult to determine.

The research brief for this report was to focus on specialist alcohol treatment interventions for those people with alcohol dependence. These treatment approaches are those reviewed by the Health Technology Board for Scotland (Slattery *et al*, 2003) and defined within Tiers 2-4 in Models of Care for Alcohol Misusers (National Treatment Agency, 2006).

Alcohol Needs Assessment

In broad terms, health care needs assessment (HCNA) is the systematic approach to ensuring that the health service uses its resources to improve the health of the population in the most efficient way. It involves methods to describe the health problems of a population, identify inequalities in health and access to services, and determine the priorities for the most effective use of resources (Cook, 2004).

Health care needs assessment has become important as the costs of health care are rising and resources for health care are, at the same time, limited. In addition, there is a large variation in availability and use of health care by geographical area and point of provision (Andersen and Mooney, 1990).

Another force of change is consumerism. The expectations of members of the public have led to greater concerns about the quality of the services they receive, from access and equity to appropriateness and effectiveness.

Doctors, sociologists, philosophers, and economists can all have different views of what 'needs' are, depending on definitions of 'need'. In recognition of the scarcity of resources available to meet these needs, health needs are often differentiated as needs, demands and supply (or capacity).

In Canada, Rush (1990) has presented a model of alcohol needs assessment, which influenced the HCNA review and has been influential in alcohol needs assessment internationally. Rush's model suggests a range of access to specialist treatment: an access level of 10% alcohol dependent individuals entering treatment per annum is regarded as a 'low' level of access, 15% 'medium' and 20% 'high' (Rush, 1990). It is however important to note that Rush's model is based on a large number of assumptions about the size of the 'in-need' population, the process of referral to various agencies and treatment drop-out. Rush's study also used a large number of proxy measures rather than direct measurement of need and access. Therefore estimation of need for alcohol treatment and access would be improved by actual data from surveys as in

the work presented in this report. In this study, we have followed the methodology recommended in the HCNA Review of Alcohol Misuse (Cook, 2004). To allow comparability we have also used the same methodology as in the recent English needs assessment (ANARP; Drummond *et al*, 2005).

Need

In health care, need is commonly defined as 'the capacity to benefit'. If health needs are to be identified then an effective intervention should be available to meet these needs and improve health. There will be no benefit from an intervention that is not effective or if there are no resources available (Wright, Williams & Wilkinson, 1998). The definition of need used in this study is 'the number of individuals in the general population with alcohol dependence who could benefit from intervention'. In this study, this number is derived from the one-year prevalence of alcohol dependence.

There are several challenges in estimating the prevalence of alcohol dependence in the general population involving the definition of alcohol dependence and the methods used to obtain the estimate. Without carrying out a specific survey of alcohol dependence and need for specialist treatment, the next best method to do this is to use data from a general population survey, as is the case in this study and the recommended methodology for needs assessment.

Assumptions in Needs Assessment for Alcohol Use Disorders

Clearly the above definition of need is based on a number of assumptions. As in standard needs assessment methodology described above, it does not take account of natural remission: that is the proportion of people with alcohol dependence who will recover without formal specialist or other interventions. This has been estimated in general population follow-up studies and using other methods, primarily in the US, and different studies have provided different estimates. We have not incorporated natural remission into the estimates since no specific estimates are available for Scotland. Furthermore, while there is evidence of natural remission of alcohol dependence over time, we have no way of knowing at present what proportion of people who eventually recover without specialist intervention would have had the course of the disorder shortened by a timely specialist intervention had it been available and accessible.

Another assumption is that the treatment provided is universally effective. This is clearly unlikely to be the case, but it is not possible to assess this within the scope or methodology of the research brief. Thirdly, not everyone who is offered treatment, assuming it is widely available, would want or accept treatment. Not everyone whom a health professional would wish to refer to specialist treatment would necessarily be willing to accept referral as they may not be in an 'action' stage of motivational readiness to change (Prochaska & DiClemente, 1987). The subgroup of those in need who wish treatment is sometimes referred to as the 'potential demand' for treatment.

Fourthly, not everyone who indicates in a survey that they would potentially wish treatment, will actually access treatment. This may reflect partly a gap between what people say in surveys and what they actually do, and the barriers (real or perceived) to people actually accessing the services they need and want. Therefore, in line with previous alcohol needs assessments, in this study we have studied the 'access' to treatment which is defined as 'the number of people with alcohol dependence who actually access treatment within a given year'. This is also referred to here as 'Service Utilisation'. Some US surveys have attempted to estimate potential demand as distinct from need, based on survey questions as to whether people with alcohol dependence would want to access treatment if it was available. However, no comparable estimate is available in Scotland.

Clearly accessing treatment is not synonymous with receiving the full programme or course of treatment

on offer, as some people will disengage prematurely. Also, within the limitations of the methodology we are unable to differentiate between people accessing treatment who are harmful drinkers as opposed to dependent drinkers.

The Gap between Need and Access

The gap between need and access can be defined as the **Prevalence-Service Utilisation Ratio (PSUR)** (Oyefeso et al, 1997). The PSUR provides a numeric estimate of the local or national gap between need for and access to treatment. This can also be expressed in terms of specific groups, such as age, gender or ethnic groups.

In summary, from this brief review of needs assessment methodology, the relationship between need, supply and demand is clearly complex in the case of alcohol use disorders, and it is beyond the scope of this research to resolve many of these methodological issues. Previous studies have shown that, at any given time, the number of people who need treatment (as defined above) greatly exceeds the number who actually access treatment. As noted above, a widely used international measure describes access to treatment for 1 in 5 of those with alcohol dependence as 'high' and 1 in 10 'low' (Rush, 1990). However, it should be noted that in the drug misuse field which has seen a large increase in availability of treatment in recent years, through considerable investment in expanding services in England, the level of treatment access for 'problem drug misusers' per annum is currently approximately 50% (National Audit Office, 2008).

At best, therefore, the level of access and PSUR should be seen primarily as a relative concept, with the utility of comparing relative levels of access in different areas or countries, and between different demographic groups, rather than there being particular value in studying or applying the absolute levels to service planning or development.

Chapter two: Scottish Alcohol Needs Assessment

This study was commissioned by the Scottish Association of Alcohol and Drug Action Teams (SAADAT) and funded by Scottish Government. It was conducted by Figure 8 Consultancy Services Ltd. in collaboration with the National Addiction Centre, Institute of Psychiatry, King's College London with statistical support from the Health Analytical Services Division of the Scottish Government.

The primary purpose of the study is, from the project brief, "to estimate, at NHS Board level, the numbers engaging in 'problematic drinking' and the proportion entering/requiring treatment, mapped against existing services."

Objectives

The objectives of this study, as laid out in the scope of the research brief, were as follows:

- In collaboration with local Alcohol and Drug Action Teams (ADATs), to map the service capacity of specialist alcohol/addiction services, including those in the voluntary and independent sectors, and primary health care services
- To conduct a survey of specialist alcohol/addiction services to estimate the number and demographic characteristics of problematic drinking clients who have presented in the last year
- To conduct a survey among a sample of general medical practices to determine the number of problematic drinkers seeking treatment or being opportunistically screened, and to determine the assessment, support and treatment provided to this group
- To use the estimates of drinking patterns from a secondary analysis of the Scottish Health Survey (SHeS) to estimate the gap between population level of need and access to treatment for problematic drinkers at a NHS Board level.

The research described in this report covers the mapping of service capacity in specialist alcohol/addiction services, the characteristics of problematic drinking clients accessing services, and uses estimates from the Scottish Health Survey and the Psychiatric Morbidity Survey to estimate the gap between need and access to treatment for problematic drinkers (defined as people with alcohol dependence). The survey of general practitioners is presented in a separate report.

Aims

- To conduct a secondary analysis of the available survey data, including the SHeS, to estimate the prevalence of alcohol dependence in Scotland, including variations by health Board areas
- To conduct a survey of specialist alcohol treatment agencies to estimate the number of individuals with alcohol dependence accessing treatment during the financial year 2006/07
- To establish the characteristics of those people attending services
- To describe the services provided by specialist alcohol agencies
- To estimate the Prevalence-Service Utilisation Ratio for Scotland as a whole and differences between health Board areas.

Methods

Study 1 - Estimating the Prevalence of 'Problematic Drinking' in Scotland

In conjunction with the Health Analytical Services Division of the Scottish Government, we reviewed the available data on 'problematic drinking' in Scotland. The ideal data for the purpose of an alcohol needs assessment would be a general household survey using a validated diagnostic tool to measure alcohol dependence and harmful alcohol use diagnoses (e.g. Composite International Diagnostic Interview) with a sufficient sample size to allow reliable estimates at a health board level, conducted within the same year as the agency access survey. In addition, the survey would ideally provide information on how many of those with alcohol dependence would want to access treatment if it was available. However, no ideal survey was available.

Instead we have used two surveys containing relevant information on problematic drinking.

1. Scottish Health Survey (SHeS; 2003; sample size=8,853 households)
2. Psychiatric Morbidity Survey (PMS; 2000; sample size=1,656 households in Scotland)

SHeS contains measures of alcohol consumption from which hazardous and harmful drinking estimates can be derived: the proportion of adults drinking over 21 and 14 units per week and drinking over 50 and 35 units per week, for males and females respectively. However, this needs assessment is focused on estimating the prevalence of people with alcohol dependence in need of specialist treatment. The SHeS uses an extended six-item version of the CAGE questionnaire. The original CAGE (Mayfield *et al*, 1974) comprised four items and has been widely validated in different populations and settings. It was originally intended as a measure of 'alcoholism', but with changes in terminology and classification the CAGE has largely been superseded by other measures, in particular the Alcohol Use Disorder Identification Test (AUDIT). The six item version of the CAGE questionnaire used in SHeS has not been validated in general populations or used in other UK or North American needs assessments, and was not felt to be a sufficiently valid estimation of the prevalence of alcohol dependence for this study. Therefore, the SHeS prevalence data needed to be adjusted.

The PMS provided data on the prevalence of AUDs measured by the AUDIT questionnaire (Saunders *et al*, 1993). A score of ≥ 8 and < 16 on the AUDIT indicates 'hazardous/harmful drinking' and a score of ≥ 16 has been used as a measure of 'alcohol dependence' (Drummond *et al*, 2005).

In relation to hazardous and harmful drinking, the AUDIT has been found to have a high degree of sensitivity (69%) and specificity (98%) in detecting hazardous alcohol consumption in a UK population (Coulton *et al*, 2006).

The AUDIT is also known to possess high sensitivity and specificity when used as a screening tool for alcohol dependence in the general population (Reinert & Allen, 2002; Rumpf *et al*, 2002). This has generally been defined as a score of 16 or more on the AUDIT. Further, the items of the AUDIT are anchored to the previous year alcohol use pattern. This makes the score a suitable measure of last year prevalence which can also be matched to last year service utilisation pattern in the gap analysis.

In addition, analysis of the PMS data by the authors in the ANARP study (Drummond *et al*, 2005) revealed a significant positive correlation (0.82, $p = 0.0001$) between the AUDIT score and the Severity of Alcohol Dependence Questionnaire (SADQ) score. Furthermore, all AUDIT-16 positives had SADQ scores that fell within the moderate and severe dependence range (i.e. SADQ ≥ 15).

In the study of a primary care sample in Wales (Coulton *et al*, 2006), a further analysis of the data demonstrated the validity of the AUDIT ≥ 16 cut-off as a measure of alcohol dependence using the Composite International Diagnostic Interview (CIDI: WHO, 1997) as the 'gold standard'. The CIDI is a comprehensive standardised instrument for the assessment of mental disorders according to the definitions and criteria of ICD-

10 and DSM-IV. The findings revealed that AUDIT ≥ 16 demonstrated a high specificity (0.98) and a low sensitivity (0.40), indicating that 98% of those identified by AUDIT-16 as dependent drinkers were also identified as such by CIDI. Conversely, a lower proportion of CIDI positives were also AUDIT ≥ 16 positives, suggesting that AUDIT-16 is a more conservative measure of alcohol dependence than CIDI. Coulton et al. (2006) have also reported that the correlation between AUDIT-16 and SADQ ($r=0.65$) was similar to that between CIDI and SADQ ($r=0.61$).

The SHeS used a six-item version of CAGE. It is likely that a cut-off point of two on a six-item CAGE questionnaire will yield a higher proportion of positives than the same cut-off on a four-item questionnaire, and our analysis shows this to be the case. The prevalence of dependence in Scotland based on the PMS using AUDIT ≥ 16 was 4.9% (95% CI = 3.5-6.7), whereas the prevalence of 'dependence' in SHeS using CAGE was 7.2%.

The PMS provided data on prevalence of alcohol dependence in both Scotland and England, which allowed a comparable estimate of prevalence between Scotland and England. However, the PMS does not have sufficient statistical power to compare different NHS Board areas within Scotland (although it did have sufficient statistical power to compare health regions within England). The SHeS did not have sufficient statistical power to compare all NHS Board areas individually. Therefore, in all cases except Greater Glasgow, NHS Board areas needed to be combined in order to provide sufficiently large sample sizes to provide robust prevalence estimates. Some health board areas were combined by the Health Analytical Services Division of the Scottish Government, who provided the SHeS prevalence estimates.

We have therefore adjusted the SHeS prevalence estimates to be comparable with the AUDIT-16 estimates from the PMS. Consequently, the overall dependence prevalence estimate for Scotland is derived from the PMS (AUDIT ≥ 16 cut off). Variation between health board area groupings within Scotland was derived from the SHeS (CAGE 2+ cut off) using an adjustment factor of 0.682 (being the ratio of prevalence from the two surveys: $4.9/7.19=0.682$) to take account of the overestimation of prevalence by six-item CAGE compared to AUDIT-16+ in the two surveys.

Although PMS was conducted before the SHeS 2003, we believe this is justified since the dependence estimate using CAGE showed relatively small changes over the five years between 1998 and 2003 (+0.2% per annum in men and +0.4% in women).

Study 2 - Estimating Access to Specialist Alcohol Treatment

A national survey in Scotland was used in order to estimate the level of access to specialist alcohol treatment. This was conducted in two phases:

1. Mapping of specialist alcohol treatment services
2. Survey of specialist alcohol treatment services

Mapping of specialist alcohol treatment services

A mapping exercise of current specialist alcohol/addiction services was carried out in the first instance by using existing data sets. Specialist treatment services were defined as any publicly-funded alcohol treatment provision falling within Tiers 2, 3 and 4 modalities of care as defined by Models of Care for Alcohol Misusers (NTA, 2006).

A preliminary list was drawn up by NHS Board area and sent out to the relevant Alcohol & Drug Action Teams for confirmation that the list represented the services in their area and that the services listed met the following criteria:

- Service provides treatment for alcohol use disorders
- Service provision is for adults
- Service is not part of the criminal justice system

Following any corrections from the ADATs the revised lists of suitable specialist alcohol/addiction agencies were then categorised as either community or residential services. Support and collaboration was sought also from Specialist Clinical Addiction Network (SCAN) members.

Survey of specialist alcohol treatment services

Two questionnaires were then developed based on the ANARP questionnaires, one for alcohol specialist residential services and the second for alcohol specialist community services. Hard copies of the questionnaires were sent by post to all agencies with a covering letter outlining the objectives of the study. A stamped, addressed return envelope was also enclosed to maximise the return rate. Information requested included:

- Agency status: statutory, voluntary, independent or other
- Primary role of service: alcohol, drugs & alcohol, drugs, or other
- Annual budget
- Total number of referrals
- Total number of assessments
- Total number of alcohol patients offered community interventions
- Total number of alcohol patients who actually received a community intervention
- Average waiting time (weeks) for community intervention
- Total number of community intervention places available at one time
- Total number of full-time equivalent staff with a caseload (alcohol)
- Characteristics of service users: gender, ethnicity, age, and episode of care
- Source of referral
- Severity of alcohol problem
- Services offered

Of the above items, the total number of alcohol patients offered either community or residential interventions was used as the measure of access to treatment.

After four weeks, follow-up phone calls were made to all agencies who had not responded, requesting the completion and return of questionnaires, in instances where the paper copy had not reached the appropriate person, electronic copies of the questionnaire were emailed.

Study 3 - Estimating the Gap between Need and Access

This phase of the research used data derived from Study 1 on the prevalence of alcohol dependence in Scotland, combined with the estimated access to treatment estimated in Study 2. The ratio of prevalence to access is the Prevalence-Service Utilisation Ratio. This was broken down by health board area; although, in most cases, health board areas had to be combined to produce sufficiently robust estimates as described above.

The key data from the agency survey for this gap analysis is the number of people reported to access treatment during 2006/07. However, this will be an underestimate of the actual number entering treatment due to an incomplete response rate from the agencies. The survey provided responses from 82 out of 97 agencies; a response rate overall of 84.5%, which was much higher than in the ANARP survey (55.7%). There was a range of response rates across different NHS Board area groupings from 72.7% to 100%.

Therefore we applied an adjustment factor to account for the non-response rate by NHS Board area grouping. This provided an increase in the estimated number of people accessing treatment, proportionate to the non-response rate by NHS Board area grouping.

Two further adjustments were applied to these data. We established from the agency survey that 8.2% of people accessing treatment were referred by other alcohol treatment agencies. This 'double counting' provided an over-estimate of the total number of people accessing treatment. We therefore adjusted the estimated access by -8.2%. We were also able to establish from the agency survey response that 67.1% of people accessing treatment were male and 32.9% were female. Using these data we were able to provide an adjusted estimate of the number of males and females accessing treatment. We considered making an adjustment for the number of people accessing treatment who were not considered to be alcohol dependent. However there was a low response rate to this item and it was not considered to be sufficiently reliable to include.

Results

Prevalence of Alcohol Dependence

Prevalence of alcohol use disorders in the Psychiatric Morbidity Survey, 2000

The PMS found the prevalence of hazardous and harmful alcohol use, with an AUDIT score of between 8 and 15, to be 22.4% (95% CI = 19.6-25.5) in Scotland and 22.6% (95% CI = 21.6-23.7) in England. The prevalence of alcohol dependence, with an AUDIT score of 16 or more, was 4.9% (95% CI = 3.5-6.7) in Scotland and 3.6% (3.1-4.1) in England.

Prevalence of alcohol use disorders in the Scottish Health Survey, 2003

The SHeS shows a prevalence rate of 27.9% for hazardous and harmful drinking, with a higher rate in males compared to females (33.4% versus 23.0%) (see Table 2.1). There is an age gradient of higher prevalence in younger males and females. As these estimates have recently been revised, they are not comparable with data from the ANARP report on prevalence in England. This prevalence rate is higher than that found by the PMS. However, as the SHeS data are the most recent, and are based on a recalculation of alcohol Units to be in line with the Office for National Statistics methodology, this is the current official estimate used by Scottish Government.

The total number of hazardous or harmful drinkers is estimated to be 1,172,300 based on the SHeS. There is some variation across geographical areas in the prevalence of hazardous and harmful drinking (25.2%-31.7%). However, these estimates were not used in the gap analysis and will not be considered further in this report.

In terms of alcohol dependence, the SHeS produced an overall estimate of dependence based on the six-item CAGE of 7.7%. The prevalence of dependence in males is approximately double that in females (9.9% versus 4.8%) (Table 2.2). This provides an estimate of the total population of dependent drinkers of 302,100. This is a higher estimate of the prevalence of alcohol dependence than was found in the Psychiatric Morbidity survey (4.9%) and is likely to be explained by the use of the six-item CAGE rather than AUDIT. There is an age gradient for alcohol dependence in both males and females, with the youngest group having the highest prevalence. This gradient is greater than for hazardous and harmful drinking. There is also variation in the prevalence of alcohol dependence across NHS Board area groupings from 6.5% to 9.0%.

Table 2.1: Estimated prevalence of hazardous and harmful drinking from the 2003 Scottish Health Survey

		% (95% CI)	General population estimate ¹	Number of hazardous/harmful drinkers	
Gender	Male	33.4 (31.5-35.3)	1,997,678	667,309	
	Female	23.0 (21.5-24.5)	2,197,389	504,957	
	Total	27.9 (26.7-29.2)	4,195,067	1,172,266	
Age²	Male	16-44	34.7 (31.7-37.7)	996,306	345,718
		45-64	36.2 (32.9-39.5)	652,447	236,186
		65+	24.4 (20.8-28.0)	348,925	85,138
	Female	16-44	27.8 (25.3-30.3)	1,023,114	284,426
		45-64	25.8 (23.1-28.5)	685,232	176,790
		65+	8.7 (6.6-10.8)	489,043	42,547
Region³	Highlands & Islands		25.2 (21.8-28.7)	231,264	58,279
	Grampian, Tayside		25.7 (22.6-28.8)	757,626	194,710
	Lothian, Fife, Borders		31.7 (29.1-34.3)	1,045,793	331,516
	Greater Glasgow		30.3 (27.1-33.5)	716,481	217,094
	Lanarkshire, Ayrshire & Arran, Dumfries & Galloway		25.9 (23.5-28.4)	873,290	226,182
	Argyll & Clyde, Forth Valley		25.4 (21.8-29.0)	570,613	144,936

Notes to table

1 General population estimates are from the GROS 2006 mid-year population estimates

2 This survey included subjects aged 16 years and above.

3 NHS Board areas have been combined in some cases to produce population sizes large enough for the purpose of this analysis.

Table 2.2: Estimated prevalence of alcohol dependence from the 2003 Scottish Health Survey

		% (95% CI)	General population estimate ¹	Number of dependent drinkers	
Gender	Male	9.9 (8.6 11.1)	1,997,678	196,815	
	Female	4.8 (4.0 5.6)	2,197,389	105,284	
	Total	7.2 (6.5 7.9)	4,195,067	302,099	
Age²	Male	16-44	12.1 (10.1-14.2)	996,306	120,553
		45-64	9.9 (7.8 12.0)	652,447	64,592
		65+	3.2 (1.7 4.7)	348,925	11,166
	Female	16-44	7.0 (5.6 8.4)	1,023,114	71,618
		45-64	3.9 (2.7 5.1)	685,232	26,724
		65+	1.4 (0.5 2.3)	489,043	6,847
Region³	Highlands & Islands	7.0 (5.0 9.0)	231,264	16,188	
	Grampian, Tayside	6.3 (4.6 8.0)	757,626	47,730	
	Lothian, Fife, Borders	7.4 (5.9 8.9)	1,045,793	77,389	
	Greater Glasgow	9.0 (7.0 11.0)	716,481	64,483	
	Lanarkshire, Ayrshire & Arran, Dumfries & Galloway	6.5 (5.1 7.9)	873,290	56,764	
	Argyll & Clyde, Forth Valley	6.9 (4.8 9.0)	570,613	39,372	

Notes to table

1 General population estimates are from the GROS 2006 mid-year population estimates

2 This survey included subjects aged 16 years and above.

3 NHS Board areas have been combined in some cases to produce population sizes large enough for the purpose of this analysis.

Adjusted Prevalence of Alcohol Dependence

The estimated prevalence of alcohol dependence was higher in the SHeS compared to the PMS. The difference in prevalence can be partly accounted for by different survey tools used in the two surveys. We have therefore used an adjustment factor to allow comparability between this study and ANARP. An adjustment factor of $4.9/7.19=0.682$ has been applied to the SHeS dependence prevalence estimates. This reduces the estimated number of people with alcohol dependence in Scotland from 302,100 to 206,000 (Table 2.3). However, all proportional differences between genders, age groups, and NHS Board area groupings remain the same.

Table 2.3: Adjusted prevalence of alcohol dependence from the 2003 Scottish Health Survey based on the prevalence estimate from the 2000 Psychiatric Morbidity Survey

			Prevalence alcohol dependence		Adjusted prevalence alcohol dependence Factor: 4.9/7.19 = 0.682	
			%	Number	% (95% CI)	Number
Gender	Male		9.9	196,815	6.7 (5.7-7.8)	134,228
	Female		4.8	105,284	3.3 (2.6-4.1)	71,804
	Total		7.2	302,099	4.9 (4.3-5.6)	206,032
Age¹	Male	16-44	12.1	120,553	8.3 (6.7-10.2)	82,217
		45-64	9.9	64,592	6.8 (5.1-9.1)	44,052
		65+	3.2	11,166	2.2 (1.6-2.5)	7,615
	Female	16-44	7.0	71,618	4.8 (3.6-6.2)	48,843
		45-64	3.9	26,724	2.7 (1.7-4.2)	18,226
		65+	1.4	6,847	1.0 (0.7-1.3)	4,669
Region²	Highlands & Islands		7.0	16,188	4.8 (4.0-5.7)	11,041
	Grampian, Tayside		6.3	47,730	4.3 (3.9-4.8)	32,552
	Lothian, Fife, Borders		7.4	77,389	5.0 (4.6-5.4)	52,779
	Greater Glasgow		9.0	64,483	6.1 (5.6-6.7)	43,978
	Lanarkshire, Ayrshire & Arran, Dumfries & Galloway		6.5	56,764	4.4 (4.0-4.9)	38,713
	Argyll & Clyde, Forth Valley		6.9	39,372	4.7 (4.2-5.3)	26,852

Notes to table:

1 This survey included subjects aged 16 years and above.

2 NHS Board areas have been combined in some cases to produce population sizes large enough for the purpose of this analysis.

It can be seen from Table 2.3 that the adjusted prevalence estimate for males and females are 6.7% and 3.3% respectively, with an overall prevalence of 4.9%. The prevalence of dependence also varies from 4.3% in Grampian and Tayside to 6.1% in Greater Glasgow.

Access to Treatment

We surveyed 97 agencies to ascertain, inter alia, the number of people accessing treatment services per annum during 2006/07. The distribution of agencies by NHS Board is shown in Figure 2.1. It will be seen that the largest number of agencies is in Greater Glasgow, followed by Lanarkshire, Ayrshire and Arran. The Highlands and Islands had the smallest number of agencies. This figure also shows the number of agencies providing data on number of people accessing treatment. The overall response rate was high (84.5%), with variation across NHS Board area from 72.7% to 100%.

We then took the number of people reported by each agency and produced a 'raw' total of people accessing treatment by NHS Board area. This is shown in Table 2.4.

Figure 2.1: Number of specialist alcohol agencies in Scotland and number of agencies responding to the survey

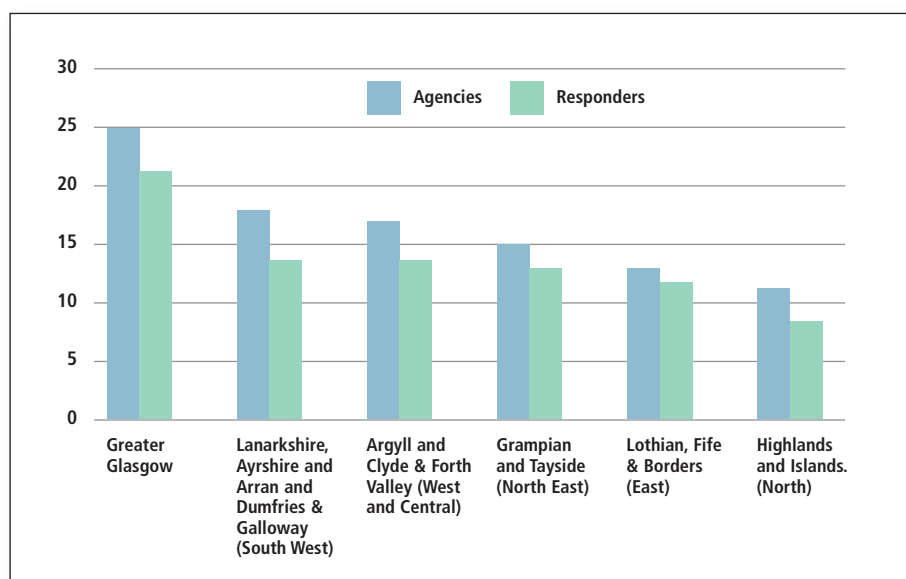


Table 2.4: Gap analysis of access to specialist alcohol treatment

	Adjusted prevalence alcohol dependence		Community raw Number	Residential raw Number	Combined raw Number	Combined adjusted Number	PSUR Ratio (95% CI)	Percent accessing treatment %
	%	Number						
Male	6.7	134,228	9,945	874	10,776	11,357	11.8 (11.1-12.4)	8.5
Female	3.3	71,804	4,876	389	5,308	5,594	12.8 (11.9-13.8)	7.8
Total	4.9	206,032	14,821	1,263	16,084	16,952	12.1 (11.6-12.7)	8.2
Highlands & Islands	4.8	11,041	584	n/r	584	604	18.3 (14.5-22.0)	5.5
Grampian, Tayside	4.3	32,552	1,386	462	1,848	1,950	16.7 (14.9-18.6)	6.0
Lothian, Fife, Borders	5.0	52,779	4,264	337	4,601	4,266	12.4 (11.3-13.5)	8.1
Greater Glasgow	6.1	43,978	4,955	359	5,314	5,808	7.6 (6.9-8.3)	13.2
Lanarkshire, Ayrshire & Arran, Dumfries & Galloway	4.4	38,713	2,166	80	2,246	2,654	14.6 (13.2-16.1)	6.9
Argyll & Clyde, Forth Valley	4.7	26,852	1,466	25	1,491	1,670	16.1 (14.2-18.1)	6.2

The first column of Table 2.4 shows the adjusted prevalence rate of alcohol dependence broken down by NHS Board area grouping and gender: this is taken from Table 2.3. The second column shows the adjusted estimated number of people with alcohol dependence. The 'raw' total number of people reported by the responding agencies (82/97) to have accessed treatment during 2006/07 in community agencies and residential agencies were 14,821 and 1,263 respectively, giving a raw combined total of 16,084.

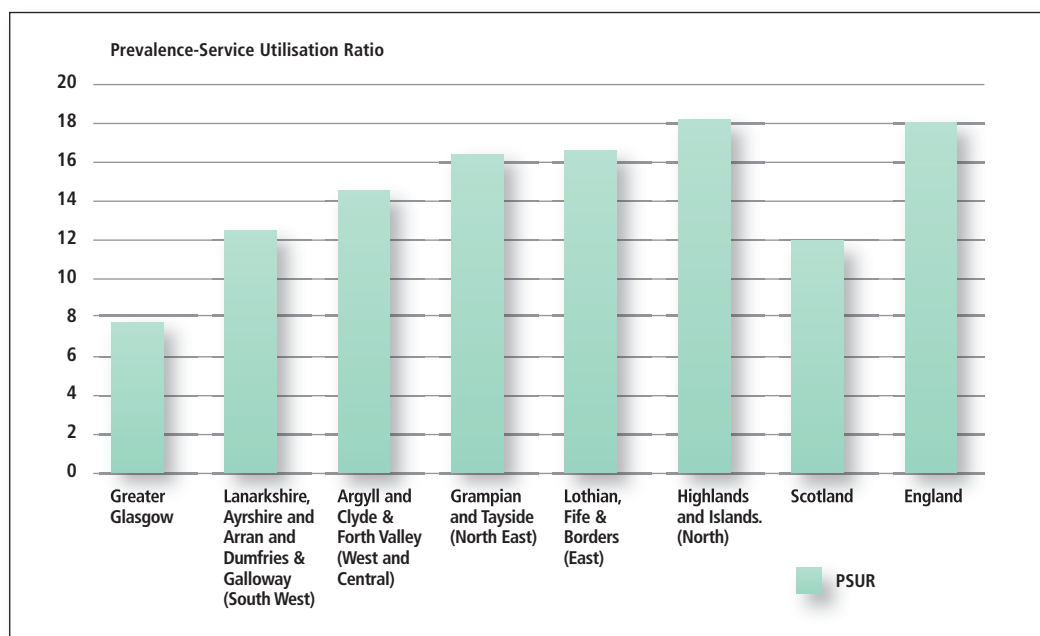
We then carried out an adjustment of the data to take into account the non-response rate by NHS Board area grouping, and the overall inter-agency referral rate of 8.2%. The first factor increases, and the second factor decreases, the estimated number. The net effect of these two adjustments is an overall increase in the estimated number of people accessing treatment from 16,084 to 16,952 (rounded to 17,000) per annum.

Prevalence-Service Utilisation Ratio

We then compared the estimated number of people in the population with alcohol dependence, with the number accessing treatment. As shown in Table 2.4 above, this can be expressed in two ways. First, in terms of the prevalence-service utilisation ratio (PSUR), a ratio of the number of people needing treatment compared to the number actually accessing treatment, which for Scotland as a whole is 1:12.1. In other words approximately one in twelve people with alcohol dependence accessed treatment in 2006/07. Second, this can be expressed as a percentage of the alcohol-dependent population that is accessing treatment. This equates to 8.2% across Scotland. There was an approximately equal level of access between males and females (8.5% versus 7.8%).

Comparing NHS Board area groupings there were differences in the level of access shown in Table 2.4 and Figure 2.2. The highest level of access was in Greater Glasgow, where one in 7.6 people accessed treatment (13.2%). Lothian, Fife and Borders had the next highest level of access (8.1%). The lowest level of access was in the Highlands and Islands, which had less than half the access level compared to Greater Glasgow (5.5%).

Figure 2.2: Prevalence-service utilisation ratio in Scotland and England



Comparison with other Jurisdictions

Figure 2.2 shows the PSUR for Scotland and England. In Scotland as a whole the PSUR was 12.1 whereas in England this was 18.0. Therefore Scotland has a 48% higher level of access to treatment overall than England. In England there was considerable regional variation in access to treatment from one in 11.8 (North West) to one in 13.2 (London) to one in 101.9 (North East).

In terms of gender differences in access to treatment, in the ANARP study females had nearly double the level of access compared to males (PSUR: males: 20.8; females: 12.4). This is very different from the pattern seen in Scotland where males and females have approximately equivalent access to treatment.

In North America a “low” level of access is considered to be 10% or one in ten people in need accessing treatment per annum. 15% is considered to be a “medium” level of access, and 20% a “high” level of access (Rush, 1990).

Characteristics of Alcohol Services

Ninety seven services providing specialist alcohol interventions have been identified, ten of which were classified as residential services and the remainder as community services.

Table 2.5: Distribution of alcohol treatment agencies by NHS Board area grouping

	COMMUNITY			RESIDENTIAL			Overall response rate
	Number of agencies	Number and % of surveys returned		Number of agencies	Number and % of surveys returned		
	N	N	%	N	N	%	
Grampian, Tayside	13	10	76.9%	3	3	100%	81.3%
Greater Glasgow	19	17	89.5%	2	1	50.0%	85.7%
Lothian, Fife, Borders	12	12	100%	1	1	100%	100%
Argyll & Clyde, Forth Valley	16	14	87.5%	2	1	50.0%	83.3%
Lanarkshire, Ayrshire & Arran, Dumfries & Galloway	17	14	82.4%	1	1	100%	83.3%
Highlands & Islands	10	7	70.0%	1	1	100%	72.7%
Totals	87	74	85.1%	10	8	80.0%	84.5%

Response Rates

The overall survey response rate was 84.5% (N=82) (Table 2.5). Eight agencies from the residential sector responded, and 74 community agencies (N.B. 11 agencies in Glasgow were returned as one entry but were disaggregated for this analysis). Table 2.5 above shows also the distribution, and number and percentage of returns, of the agencies across NHS Board area groupings for both community and residential services. No specific information was available on the non-responders and this might have introduced some biases in our sample (e.g. size of the agency and type of organisation). However, the very high response rate should have minimised these biases. Overall the return rate was very high for both community and residential services compared to previous surveys of this kind.

Service Type and Staff Numbers

Among the community services, 37.5% were primarily alcohol services and 59.4% were combined drug and alcohol services. A further 1.6% were described as 'mental health', and 1.6% as 'addiction' services. Almost half (48.4%) of all agencies were non-statutory (voluntary), 46.9% statutory (NHS) and 4.7% private. Among the residential services three were non-statutory (voluntary), three statutory (NHS) and two independent (private). Moreover, only three were primarily alcohol services whilst the remainder were both drug and alcohol services. The estimated number of whole time equivalent personnel working in specialist alcohol agencies across Scotland is approximately 632. The average Whole Time Equivalent (WTE) number of staff for community and residential agencies was six and 11 respectively.

Interventions Offered

Each community and residential agency was asked to identify which treatment interventions were being provided. All agencies provided more than one intervention. The community sector provided on average 5.2 interventions, most commonly structured psychological interventions, advice, and brief interventions (see Table 2.6).

Residential agencies only provided residential rehabilitation (including detoxification) and inpatient treatment. No other interventions were reported among the eight responders.

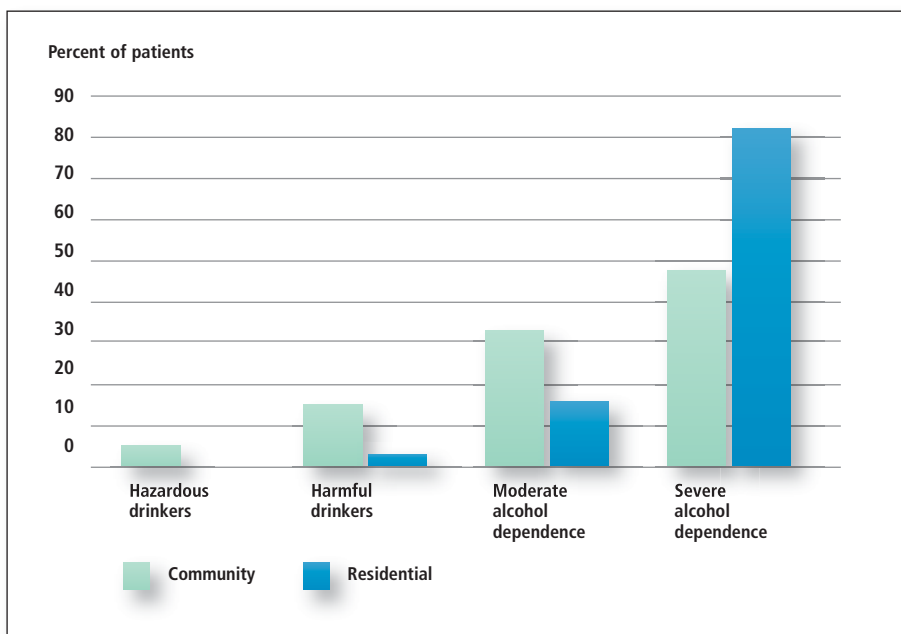
Table 2.6: Treatment Interventions Provided by Community Services

INTERVENTIONS	Number	% services
Care planned individual or group counselling/therapy - abstinence orientated	33	66.0%
Care planned individual or group counselling/therapy - controlled drinking	31	62.0%
Advice & information: alcohol	29	58.0%
Brief interventions (alcohol)	22	44.0%
Liaison alcohol services for acute medical/psychiatric sector	18	36.0%
Alcohol detoxification - at home (specialist service prescribing)	15	30.0%
Alcohol detoxification - clinic-based	15	30.0%
Initiated - Acamprosate	14	28.0%
Initiated - Disulfiram	14	28.0%
Alcohol outreach/street service	13	26.0%
Drop-in service for alcohol	11	22.0%
Alcohol detoxification - shared care (i.e. with GP)	11	22.0%
Day programme - abstinence orientated	11	22.0%
Alcohol - Arrest referral	8	16.0%
Alcohol Groups (e.g. Drink driving)	7	14.0%
Other structured psychological interventions - alcohol specific	5	10.0%
Other structured alcohol specific pharmacological interventions	3	6.0%
Day programme - controlled drinking	2	4.0%

Service User Characteristics

Of the clients attending residential agencies, 97.4% were reported as being moderately and severely alcohol dependent compared with 81.1% of community agency clients. In both types of agency, clients with more severe alcohol dependence were the largest group of clients (see Figure 2.3 below). However, caution is needed in interpreting these estimates as only 19% of community agencies provided data on this variable. Other characteristics of clients including gender and number of clients treated or referred to different programs in each NHS Board area grouping, are also discussed in the section on gap analysis.

Figure 2.3 - Alcohol use disorder by treatment setting



Source of Referral

In the community services the largest proportion of referrals to alcohol agencies was GP/primary care referrals (35.1%) followed by self referrals (17.7%), whilst for the residential services the largest source was from community (NHS) alcohol services referrals (40.9%).

Estimated Annual Budget

Agencies were asked to give details of the levels of funding they receive for specialist alcohol treatment services, and were asked to estimate the proportion of joint alcohol and drug spend used for those with alcohol as their major problem. However, there are several problems in estimating the total spending on alcohol services, given that many agencies are combined drug and alcohol agencies and not all were able to clearly identify the relative spending on alcohol versus drug services. We approached this

problem by computing the mean annual budget of alcohol only agencies (including those drug and alcohol agencies which were able to breakdown this information) and then assumed that this would apply to all non responders, as well as the remaining drug and alcohol services where this information was not provided. This survey of services found an annual spend on alcohol services of £61 million per annum (£51 million for community services and £10 million for residential services). It is also important to note that this estimate includes all sources of funding (e.g. NHS, donations, etc.).

The Audit Scotland survey of commissioners estimated a spend of £30 million per annum on alcohol only services, £84 million on drug only services and £59 million on joint alcohol and drug services.

No funding is directly allocated to specialist alcohol services and it is for local areas to determine their funding priorities. However, if half of the joint drug and alcohol services activity is on those with alcohol as their major problem, the results of these two different approaches to estimation are similar.

Waiting Times

The average waiting time for assessment was 3.5 weeks. Community services reported a mean wait of 3.3 weeks (range: 0-18 weeks) and residential agencies a mean wait of 3.8 weeks (range 0-6.3 weeks). In the community sector, the shortest mean wait was observed in the Grampian and Tayside NHS Board area grouping (1.8 weeks) and the longest mean wait was in the Lothian, Fife and Borders NHS Board area grouping (6.3 weeks) (Table 2.7 below). The study did not estimate potential demand for services. Demand for services may be kept low by referrers' awareness of limited service capacity and the lack of systematic process to identify need. The introduction of screening is likely to increase demand for specialist treatment services.

The average number of patients (monthly) on the waiting list for assessment was 14.1 in the community services and 10.8 in the residential services.

Table 2.7: Treatment Interventions Provided by Community Services

NHS Board amalgamated area	Mean	N	Std. Deviation
Highland & Islands	2.5	6	0.4
Grampian, Tayside	1.8	4	0.8
Lothian, Fife, Borders	6.3	8	6.1
Greater Glasgow	2.2	5	1.9
Lanarkshire, Ayrshire & Arran, Dumfries & Galloway	3.7	6	1.7
Argyll & Clyde, Forth Valley	2.3	11	1.3
Total	3.3	40	3.3

Limitations

This study shared many of the limitations common to needs assessment in general and needs assessment in the context of alcohol use disorders in particular. However, the study represents the first evidence-based assessment of need for specialist alcohol treatment in Scotland. It uses methods recognised as the best available within the field given the limitations of the available data.

There are limitations inherent in conducting needs assessment. In health care need is typically defined as 'the capacity to benefit.' Not everyone who has a target condition, such as alcohol dependence, necessarily either needs or will access alcohol treatment. Further having accessed treatment there is no guarantee that the treatment will result in benefit. However, pragmatically the definition of need used in this study is 'the number of individuals in the general population with alcohol dependence who could benefit from intervention'. In this study, this number is derived from the one year prevalence of alcohol dependence which involves a number of assumptions.

In terms of estimating 'need' for treatment no ideal dataset was available. The ideal approach would have been to carry out a specific, up-to-date household survey using a standard diagnostic tool (e.g. WHO Composite International Diagnostic Interview) with a much larger sample size than the SHeS to allow for analysis at Health Board level, including a measure of potential demand for alcohol treatment (i.e. asking whether people would want to seek treatment if it was available). Additional value could be added by a longitudinal study of natural history of alcohol use disorders in the general population in Scotland which would allow for estimates of 'natural remission', those with alcohol dependence who recover without specialist treatment. These approaches however were not in the project brief. Future national surveys should however consider including these elements. Therefore the best available data from the PMS and the SHeS were used to estimate need.

This study did not consider the level of need for treatment in hazardous or harmful alcohol users who could have benefitted from early identification and brief intervention in primary care or other non-specialist settings. This was outside the remit of this study. However, it is important for the Scottish Government to consider the potential gap between need for and access to interventions for hazardous and harmful drinking as part of the full range of approaches to alcohol use disorders, particularly as the Government has placed a high priority on this in its Alcohol Framework (2009).

As no ideal measure of need was available we have used the data provided by Health Analytical Services Division, which was responsible for the need estimate in this study, as the best available data. This allowed estimates of need to be made for Scotland comparable with the data in England. Results from this needs assessment are best seen in the context of relative estimates of need and access, comparing areas and countries using the same methodology, rather than as absolute measures.

There were some limitations in terms of assessment of access to treatment in this study. First, we did not obtain a 100% response rate to the survey. However, the 84.5% response rate compares favourably with the ANARP study (55.7%). In addition, the estimated treatment access was based on an extrapolation from responders to non-responders which may have introduced bias.

Second, some items in the survey had greater missing data than others. Importantly, we had a relatively small response rate to the item on types of drinkers referred to services which did not allow adjustment to the estimates of alcohol dependent patients accessing services. However, we did have acceptable response rates to the question on inter-referral between alcohol specialist agencies which reduced the risk of double counting patients who attended multiple agencies in the course of one episode of treatment.

The estimated number of people entering residential treatment was based on a sample size of 8 agencies. While this was an 80% response rate to the survey, which is high for studies of this type, the

total number of admissions are relatively small and are likely to vary from year to year. Hence the level of access to treatment overall was based on combined community and residential data.

We considered access to alcohol treatment as individuals being offered alcohol interventions. It is possible, and indeed based on other research likely, that some patients did not complete treatment interventions that were offered or that the treatments offered to some patients were inappropriate to meet their needs. However, this was outside of the remit of this project. Nevertheless, as the methodology used was comparable with the ANARP project, and the same methodology was applied across Scottish agencies, the findings allow comparisons of the need being met within areas of Scotland and countries and areas within the UK.

In summary, the study had a number of limitations in common with other alcohol needs assessments. However, the assumptions and limitations have been clearly described in the body of report, and due caution should be exercised in interpreting the findings. It will be for future research to address the limitations of the current study.

Chapter Three: Summary of Findings and Conclusions

Summary of findings

1. The prevalence of alcohol dependence in Scotland was estimated using a composite of the two most recent relevant general population surveys of adults 16 years and over (Psychiatric Morbidity Survey, 2000 and Scottish Health Survey, 2003). Neither survey provided an 'ideal' method of estimation, but the synthetic estimate derived from the two surveys provide an estimate of need for specialist alcohol treatment comparable with the previous ANARP study in England from 2005.
2. The prevalence of hazardous and harmful drinking in Scotland was between 22.4% and 27.9% depending on survey methods used. The higher estimate of 27.9% is the more recent, and is the official estimate used by Scottish Government to be in line with the current Office for National Statistics methodology. Males had a higher level hazardous/harmful drinking prevalence compared to females (33.4% versus 23.0%). This equates to an estimate of 1,172,300 adult hazardous/harmful drinkers in Scotland. It should be noted however that surveys tend to under-estimate hazardous and harmful drinking compared to alcohol sales data.
3. There was relatively little variation in the estimated level of hazardous/harmful drinking in Scotland by NHS Board area grouping (range: 25.2% - 31.7%). Greater Glasgow had the highest prevalence of hazardous/harmful drinking and Highlands and Islands the lowest.
4. The estimated prevalence of alcohol dependence in Scotland based on the Psychiatric Morbidity Survey was 4.9%, which equates to 206,000 people, with males having approximately twice the prevalence of females (6.7% versus 3.3%). This is a lower male:female ratio (2:1) than in England (3.4:1). The prevalence of male alcohol dependence is similar in Scotland and England (6.7% versus 5.8%) but the female prevalence is approximately double in Scotland compared to England (3.3% versus 1.7%). The higher Scottish prevalence rate overall for alcohol dependence is therefore largely accounted for by the higher prevalence in women.
5. There were variations in the prevalence of alcohol dependence by NHS Board area grouping with Greater Glasgow the highest (6.1%) and Grampian and Tayside the lowest (4.3%). However, this variation is less than that across English areas (Scotland: 1.4:1; England: 3.2:1). Therefore, the Scottish population appears more homogeneous than England in patterns of hazardous and harmful drinking, and alcohol dependence, both in terms of regional variation and gender.
6. There were relatively small differences in response rate by NHS Board area grouping (72.7%-100%) allowing a relatively simple adjustment of estimated access to treatment to take account of non-responders.
7. The estimated total number of people with alcohol dependence accessing specialist treatment in Scotland is 17,000 out of an estimated population of people 'in need' of treatment of 206,000. The overall prevalence-service utilisation ratio (PSUR) in Scotland is therefore 12.1, or 8.2% of the in need population.
8. There were relatively small differences in the level of access for males and females, slightly favouring males. There were larger variations in the level of access across NHS Board area groupings from one in 7.6 in Greater Glasgow to one in 18.3 in the Highlands and Islands.

9. We recommend that consideration should be given to improving access to treatment in those NHS Board areas with lower levels of access.
10. The overall response rate to the survey was 84.5%, which was above average for a survey of this type - for instance, the percentage of respondents to the previous census of alcohol agencies in England was 44% (Heather et al, 2000) and 56% in ANARP (Drummond et al, 2005). This allows confidence in the representativeness of the responses to the questionnaire and the PSUR estimate.
11. No specific information was available on the non-responders which might have introduced some biases in our sample, such as the size of the agency (small versus large) or the type of organisation (statutory versus non statutory). However, the very high response rate as well as the roughly similar proportion of responders and non-responders between community versus residential services provides further evidence that the responders sample was representative of community and residential services operating across Scotland.
12. The estimated annual spend on specialist alcohol treatment in Scotland in 2006/2007 was £61 million. The estimated number of whole time equivalent personnel working in specialist alcohol agencies across Scotland is approximately 632.
13. The most common interventions provided by community alcohol agencies were advice, brief interventions, and structured psychological interventions, whilst residential services provided just a limited number of interventions.
14. Both community and residential agencies reported the largest proportion of clients as being severely alcohol dependent, and most clients in both community and residential programmes were moderately or severely alcohol dependent.

Conclusions

1. Compared with England, Scotland has a 48% higher level of access to specialist alcohol treatment. However, none of the Scottish areas achieved even a 'medium' level of access to treatment by North American standards (i.e. 15%), although Greater Glasgow came close to this level (13.2%). All other areas had levels of access below that deemed 'low' by American standards (1 in 10). All Scottish area groupings performed better than the lowest 4 (of 9) English regions in terms of level of access.
2. We recommend that commissioners consider increasing access to treatment for those with alcohol dependence in all parts of Scotland, with an initial target of achieving a medium level of access of 15%. Priority should be given to those areas with the lowest access.
3. In designing future national surveys to estimate the prevalence of alcohol dependence in Scotland, the Scottish Government should consider including standardised diagnostic or screening tools such as the World Health Organisation's Composite International Diagnostic Interview or Alcohol Use Disorders Identification Test. Also methods of estimating 'natural remission' and potential demand for treatment should be considered in designing future surveys.

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