# Perspectives in alcohol and drug consumption in Europe

## Social and epidemiological outlooks of three European contexts

edited by Marco Riglietta
and Giovanni Viganò

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# *Indice*

# *Introduction*

by *Luigi Mauri*[1] and *Laura Tidone*[2]

The project "Prevention of poly-drugs addiction and reduction of drug-related harms programs for young people in recreational settings" financed by the specific programme "Drug prevention and information 2007-2013" - European Commission: Directorate general justice, freedom and security[3] pursued two main objectives: the first was to give rise to and pull for an appropriate and robust awareness of the problem of recreational consumption and poly-consumption among young people in Europe, in order to support new policies and intervention strategies in facing this increasing phenomenon; the second was to improve the knowledge base and the exchange of information about the prevention and reduction of drug-related harms programs in recreational environments.

The object of analysis the project was focused on prevention interventions implemented in the recreational and night contexts and actions targeted to so-called *recreational consumers*.

The first phase of the transnational research project was represented by the collection and analysis of statistical data, available from institutional sources and other existing information about the target population, in order to give a description of the background of the phenomenon of recreational consumption and poly-consumption among young people.

[1] Chief Executive of Synergia.

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[3] http://ec.europa.eu/justice_home/funding/drugs/funding_drugs_en.htm. The Applicant of the project was the ASL of Bergamo (Italy). The partners of the project were Synergia (Italy), the University of St. Andrews in Scotland, the National Board of Health of Denmark. The Associated partners were the Lombardy Region (Italy) and the Eotvos Lorand University (Hungary).

This volume is an overview of the present situation of the phenomenon of recreational consumption in three different European countries: Scotland, Italy and Denmark.

It is structured in three different sections, one for each country, moreover every section highlights the national epidemiological framework and drug use among people aged 15-34, the national addiction policy framework and the national addiction intervention programs and services.

The Scottish analysis presents data also for three Scottish Health Boards: Fife, Forth Valley and Tayside. The Italian analysis presents data also for the Lombardy Region and the ASL of Bergamo.

This volume is the result of the joint work of the three national teams involved in the project: for the Italian team, Laura Tidone, Marco Riglietta, Luca Biffi, Elvira Beato of the ASL of Bergamo, Giovanni Viganò, Giuliano Paterniti, Danilo Bolano of Synergia; for the Scottish team, Gerry Humphris, Jo Cecil and Tahira Akbar of the University of St. Andrews, Alex Baldacchino of the University of Dundee; for the Danish team, Børge Sommer and Erik Damberg of the National Board of Health; Lars Bertil Merinder and Lotte Sønderby of the Dual Diagnosis Department of the Aarhus University Hospital.

A special thanks to Marina Matucci, Fabio Squeo, Carla Monica Dodesini of Lombardy Region (Italy) and Zsolt Demetrovics of Eotvos Lorand University (Hungary) for their valuable contribution to the project as associate partners.

*The project "Prevention of poly-drugs addiction and reduction of drug-related harms programs for young people in recreational settings" has been financed by the Commission of the European Union. The conclusions, recommendations and opinions presented in this document do not necessarily reflect the opinion of the Commission.*

# *1. The Scottish context*

by *Gerry Humphris*[1], *Alex Baldacchino*[2], *Jo Cecil*[3] and *Tahira Akbar*[4]

## 1.1 East Central Scotland addiction services for NHS Tayside, Fife & Forth Valley

Scotland covers an area of 78, 772 km² accounting for around a third of the whole of the United Kingdom's geographical area. Scotland's terrain consists of the rural lowlands and the highlands, divided by the Highland Boundary Fault. The Highlands consist of hills and lochs originating from glaciers of the Ice Age (Wilson & Murphy, 2004; Wikipedia.org). NHS Tayside, Fife & Forth Valley fall largely within the Central Lowlands.

Scotland's population has remained fairly stable over the past fifty years, at approximately 5 million, i.e. around 10% of the UK population. However, demographic data of the past decade indicate an overall decrease of around 0.2% (8,900), despite a small increase over the past few years – i.e., an increase of 30,600 from June 2001 to June 2005. This most recent rising trend is believed to be largely due to a significant gap between in-migration and out-migration, of about 19,000. The majority of the gain (12,500) was from the rest of the UK, with the next biggest contribution being from overseas (7,300). The areas, in Scotland, seeing the largest rises in population over the past 10 years, are West Lothian, East Lothian and Stirling. Stirling saw a percentage rise of 5.5%, whereas Fife saw less of a

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rise (2.0%) and Dundee saw a decline (-6.7%) (General Register Office Scotland, 2006). The majority (around 80%) of Scotland's population is concentrated around the central belt (Wikipedia.org). When considering the number of individuals per hectare, not surprisingly, cities trump the highest. In 2000, Dundee had 24.68 persons / hectare, Clackmannanshire had 3.05 persons/hectare, Fife had 2.63 persons/hectare, and Sterling had 0.39 persons/hectare (General Register Office Scotland, 2000). NHS Forth Valley and NHS Fife currently offers health services for populations of approximately 280,000 (http://www.forthvalley.scot.nhs.uk/; http://www.nhsfife.scot.nhs.uk/); while NHS Tayside offers health services for approximately 389,700 people (http://www.nhstayside.scot.nhs.uk/ ).

Birth and death rate figures over the past few decades indicate a gradual decline in births (from around 20 per 1,000 population in 1951 to 10.7 per 1,000 population in 2005) with a relatively stable death rate (12.6 in 1951 and 10.9 in 2005, per 1,000 population). This gradual increase in the gap between deaths and births is similar to other European countries, however within the other countries this natural decrease in population is compensated for by higher levels of in-migration (Statistical Office of the European Communities, 2007; General Register Office Scotland, 2006).

The general fertility rate (births per 1,000 females aged 15-44) for Scotland has been gradually declining since the 'baby boom' of the 1960's (from 99.5 in 1962 to 51.5 in 2005) (General Register Office Scotland, 2006). This could be interpreted as an adaptive process, given that the female population aged 15-44, was relatively low in the 1960's, and the general fertility rate gradually decreased as the 15-44 female age group gradually increased. Over the past 20 years, expectation of life at birth in Scotland increased steadily. Expectation of life for males and females born around 1981 was 69.1 years and 75.4 years respectively. These rose to 74.3 years and 79.4 years respectively for Scots born around 2004. These figures are projected to continue rising in the next 2 decades. Despite this gradual rise, when compared to other European countries, Scotland has one of the lowest life expectancy. For males, life expectancy is about a year lower than the average in European countries, and for females it is about 2 years lower. Overall, the two most common causes of death within the Scottish population are cancer (27%) and ischaemic heart disease (19%). However, interesting data emerges when cause of death is explored for different age groups and for the different genders (Figure 1).

*Figure 1.* *Causes of death by age group*

| | | *Age group 1 - 14* | *Age group 15 - 34* | *Age group 35 - 44* | *Age group 45 - 74* |
|---|---|---|---|---|---|
| Males | Main cause | Diseases of the nervous system | Suicide | Suicide | Cancer |
| | Followed by | Cancer & accidents | Accidents & mental disorders (largely associated with drug & alcohol abuse) | Cancer | Ischaemic heart disease |
| Females | Main cause | Cancer | Suicide | Cancer | Cancer |
| | Followed by | Accidents & diseases of the nervous system | Cancer & accidents | Suicide | Ischaemic heart disease |

Suicide is a major cause of death between the ages of 15 to 44 years.

Another interesting aspect to take note of is the change in age structure in the Scottish population. Changes in proportions of different age groups impact on a country's economy. Over a decade, Scotland has seen a 10% reduction in the under 15s and under 25s; with no change in the 30-40 age group; and increases in the 45-59 (+14%), 60-74 (+3%), and 75+ (+14%) age groups. These indicate that Scotland's population is an ageing one with longer life expectancies.

Migration is difficult to measure and to project. Data for the past decades show that Scotland's population was subjected to a net out-migration –i.e. more people left Scotland than people moving in. Over the past 3 years this trend appears to be gradually changing with the population experiencing net migration gains. In the year 2003-2004, Scotland experienced the largest ever recorded net in-migration of 26,000. Migration peaks in and out of Scotland tend to occur between late-teens and mid-twenties, for both men and women. This reflects moves out of the parental environment in search of educational and employment opportunities. Areas in Scotland experiencing the highest net in-migration over the past decade include East Lothian, West Lothian and Scottish Borders, whereas those experiencing the highest net out-migration include Aberdeen City, Shetland Islands and Dundee City (General Register Office Scotland, 2006).

Scotland's economic indicators show a positive trend. This parallels the whole of the UK economy as well as that of the rest of Europe. Figures for 2005 highlight that within the UK, Scotland had the 4$^{th}$ largest Gross

Domestic Product (GDP), amounting to £86.3 billion, giving a £16,944 per capita value. In 2006, the average economic growth was 2.2%. The main contributor to this economic growth is the service sector, which accounts for 72% of Scotland's economy. The health and well-being of the Scottish population is fundamental to the maintenance of a positive economic outlook. Expenditure on health in Scotland is forecasted to increase annually by 6% reaching the figure of around £10 billion in 2008 (double the amount spent in 1999), amounting to around £2000 per person (Scottish Executive, 2006a). This parallels the health expenditure within other Western European countries. The outcome of increased expenditure on health is monitored through indicators such as life expectancy, quality of care, reduced waiting times and equity of health care (including the more remote areas of Scotland) (Scottish Executive, 2006b).

Scotland's employment market continues to strengthen. It currently stands at 75.2% (2,474,000), being above the average of the rest of the UK (Scottish Executive, 2006a) and exceeding that of most other European countries (Statistical Office of the European Communities, 2007. Unemployment levels are also very low at 5% (Scottish Executive, 2006a). In-migration has contributed significantly to the workforce population. Recent figures for the UK indicate an overall increase of 1.5% (Office of National Statistics, 2006). The Scottish NHS employs around 6% of the Scottish workforce population and about a quarter of the public sector workforce. Dundee is considered to be one area with highest levels of unemployment, an indicator of social deprivation. *Workforce Plus* (Scottish Executive, 2006c) aims to reduce levels of unemployment is these socially deprived areas. The health and well-being of such employees is paramount to the efficiency and productivity of the NHS. *Delivering for Health* (Scottish Executive, 2005) sets out targets for Health Boards to reduce sickness days from current level to the 4% mark.

## 1.2 Country epidemiology on drug & alcohol

The epidemiology of drug and alcohol misuse gives clear indications on the extent of the problem, the nature of the problem, quantifies the impact on biological, psychological and social morbidity and also quantifies drug and alcohol related mortality. Such data, within most European countries, is collated methodically on a regular basis, providing the opportunity to explore trends over time and across countries. The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) serves this purpose – i.e.

to ensure standardized methods of data collection and to provide useful data on trends across Europe.

Having reliable data provides a basis for development of interventions / sanctions / services that are effectively and efficiently responding to the needs of the population. It also provides an indication for forecasting what financial burden the country has to carry, to respond to the demands / needs of the at risk population and the population with the risk.

### *1.2.1 Drug & alcohol misuse in the general population*

Scotland has one of the highest rates of illegal drug use in Europe (EMCDDA, 2006). Data from *Scottish Crime Surveys* (Fraser, 2002; McVie, S., Campbell, S. & Lebov, K., 2004) indicate an upward trend in the number of individuals ever using illegal drugs in their life. However, the data also indicates that prevalence of those using drugs in the last 12 months has fluctuated over the years implying that the prevalence of illegal drug misuse is not stable (Figure 2).

*Figure 2. Percentage prevalence rates over the years*

| | *Ever used* | *Used in the last 12 months* |
|---|---|---|
| 1993 | 18% | 7% |
| 1996 | 23% | 9% |
| 2000 | 19% | 7% |
| 2003 | 27% | 5% |

The reduction in prevalence rate seen in 2000 is primarily due to a reduction in drug use in the 20 – 24 age group. The drug most commonly used is cannabis. This parallels with data from other European countries (EMCDDA, 2006). In 2000, cannabis was used by 17% of the Scottish population at one point in their life – i.e. by 1 in every 6 people. This increased to 1 in every 4 (24%) in 2003. Similarly, those reporting use in the past 12 months increased from 6% in 2000 to 8% in 2003. In both surveys the use of cocaine and opiates was low (<1%) (Fraser, 2002; McVie, S., Campbell, S. & Lebov, K., 2004).

An estimate of the 'problem drug user' population (PDU) (defined as using opiates and benzodiazepines only) was given by Hay *et al* (2001). By using a capture-recapture methodology researchers estimated that in 2000 there were 55,800 PDUs – i.e. 2% of the Scottish population aged between 15 and 54. When looking at the data by different Health Boards, Fife and Forth Valley have prevalence rates below the National average, whereas Tayside is above (Figure 3). The higher figure for Tayside reflects

the prevalence gap between cities and non-cities. NHS Tayside covers Angus, Perth & Kinross and Dundee City. Prevalence rates for these council areas are 1.2%, 1.3% and 3.5% respectively.

*Figure 3. Prevalence of problem drug use*

| | *Known* | *Total estimate* | *Population (age 15- 64)* | *Prevalence* |
|---|---|---|---|---|
| Nhs fife | 1,348 | 2867 | 192,389 | 1.5% |
| Nhs forth valley | 730 | 2208 | 154,777 | 1.4% |
| Nhs tayside | 1575 | 4304 | 204,869 | 2.1% |
| Scotland | 22,795 | 55,800 | 2,853,682 | 2.0% |

*Source: Data extracted from Hay et al, 2001*

Overall, the male to female ratio is estimated at being between 2:1 and 3:1. Age at first onset was reported as most frequently between 11-19 years (Hay *et al*, 2001; Fraser, 2002; McVie, S., Campbell, S. & Lebov, K., 2004).

An estimation of 797 drug misusers per 100,000 population in 2001/2002 was also reported. For Tayside, the estimate rose to 1434 per 100,000 population and for Dundee City it rose even higher to 2700 per 100,000 population (Baldacchino *et al*, 2007).

Alcohol misuse in Scotland is high. It is unclear why such high levels of misuse are seen among the general population; however, social and cultural aspects appear to play a role in initiating and maintaining the problem (Mental Health Foundation, 2006). Drinking levels in Scotland are higher than those for most of the rest of Europe (Scottish Executive, 2002). It is estimated that 44% of men and 27% of women are drinking in excess of recommended safe limits for drinking. Moreover, 26% of men and 10% of women are drinking double or more than, the recommended safe limits (ISD, 2005). There also is an implication that such levels have continued to rise over the years for females but we may be seeing a gradual decline in the prevalence for men (Shaw *et al*, 2000) (Figure 4).

*Figure 4. Prevalence for alcohol misuse abive recommended safe levels*

| *Year* | *Males* | *Females* |
|---|---|---|
| 1995 | 33% | 13% |
| 1998 | 34% | 15% |
| 2003 | 29% | 17% |

*Source: Scottish Health Survey*

Within a younger age group higher percentages are estimated – in 2004, 40% of boys and 46% of girls reported drinking alcohol despite being underage (ISD, 2005). The age of first onset of drinking is 9 – 11 years. Excess consumption on at least one occasion is reported by 77% of 15 year olds (SALSUS, 2002). It is interesting to note that percentages for girls are higher than those for boys – further epidemiological data is required to identify whether this finding is an emerging trend.

Considering all the potential methodological limitations the estimated prevalence of alcohol misusers was reported at 25,000 per 100,000 population (Baldacchino *et al*, 2007).

### *1.2.2 The treatment seeking population*

The *Scottish Substance Misuse Database* (SDMD) holds epidemiological data on the treatment seeking population of drug misusers. In 2005/2006, 13,791 new patients (first time ever / re-presenting after a 6 month gap) presented to services in Scotland, corresponding to a European Age Standardized Rate of 289 per 100,000 population. This is an increase of 2106 (18%) patients since 2001 (ISD 2006). Given that the Problem Drug User population in Scotland in 2000 is believed to be 55,800 the treatment capture of new patients is such that only around one in five problem drug users reach treatment services. This figure needs to be interpreted with caution because it is based on 'new' patients only.

In Fife the number of new patients presenting to services in the year 2005/2006, was 1218 – almost double the number for 2001/2002 (617). For Forth Valley NHS board, the number also almost doubled, from 294 to 518. For NHS Tayside the number rose from 346 to 902 (ISD 2006) (Figure 5).

*Figure 5. New patients in treatment*

| | | *2001/02* | *2005/06* |
|---|---|---|---|
| Nationally | Number | 11 685 | 13791 |
| | Per 100,000 population | 243 | 289 |
| Nhs fife | Number | 617 | 1218 |
| | Per 100,000 population | 196 | 384 |
| Nhs forth valley | Number | 294 | 518 |
| | Per 100,000 population | 113 | 202 |
| Nhs tayside | Number | 346 | 902 |
| | Per 100,000 population | 99 | 269 |

When considering gender ratios, male attendees are twice as common as female attendees.

The majority of attendees reported heroin use (7910 patients; 68%), followed by cannabis (4441 patients) and diazepam (3558 patients; 30%). Cocaine use was reported by 1250 (11%) patients and crack cocaine by 484 (4%) patients. These figures indicate a steady rise in cocaine (8% in 2004/05; 5% in 2001/02) and crack cocaine use (3% in 2004/05; 2% in 2001/02) (ISD, 2006).

When classifying reports on heroin used by health boards some interesting trends emerge (Figure 6):

*Figure 6. Percentage reported heroin use by health boards*

| | *2001/02* | *2002/03* | *2003/04* | *2004/05* | *2005/06* |
|---|---|---|---|---|---|
| Nhs fife | 70% (571) | 75% | 72% | 72% | 70% |
| Nhs forth valley | 76% (260) | 78% | 71% | 73% | 79% |
| Nhs tayside | 51% (321) | 53% | 66% | 73% | 82% |
| Scotland | 77% | 76% | 71% | 68% | 68% |

Patients falling under NHS Fife show a steady rate – around the 72% mark. In NHS Forth Valley levels have been close to the National average up to 2004 when there appears to be a rising trend emerging. In NHS Tayside there is a steady rise over the years from a below to above National levels. Using the figures for the estimated total number of PDUs for each Health Board for 2000 and using the figures in table 6 above for 2001/02 as the closest estimate, we can calculate that in 2000/02 NHS Fife had 20% of PDUs in treatment, NHS Forth Valley had 12% and NHS Tayside had 7%.

Injecting drug users constitute about a third (29%) of those known to treatment services. This level has been gradually decreasing in all age groups over the years (38% in 2001/02). Around a third (27%) of those injected reported having shared needles/syringes. This percentage has also been gradually decreasing. This gradual decline has not been reflected in NHS Fife (36% in 2001/02; 41% in 2005/06), NHS Forth Valley (47% in

2001/02; 49% in 2005/06) and NHS Tayside (22% in 2001/02; 33% in 2005/06) (ISD 2006).

It is unclear what percentage of the 'problem alcohol users' (PAUs) within the general population is receiving some form of treatment. In England, the *Alcohol Needs Assessment Project* (Drummond *et al*, 2005) estimated a Prevalence Service Utilisation Ratio of 18 – i.e. only 1 in every 18 individuals in need of treatment were getting treatment. This value can be assumed to be similar in Scotland. Data from various sources (ISD 2007) can give some inferences on the treatment seeking population of PAUs:

- In 2005/06, 4% (39,061; 719 per 100,000 population) of all General Hospital discharges were alcohol-related, 90% of which were resulting from emergency admissions. This is 7% higher than alcohol-related discharges in 2001/02.
- 64% of all alcohol-related discharges were diagnosed with 'Mental & Behavioural Disorders Due to Use of alcohol' with the majority (29%) diagnosed as 'Harmful Use'.
- About 1 in 6 General Hospital discharges were diagnosed with 'Alcoholic Liver Disease'.
- Gender ratios for alcohol-related General Hospital discharges are around 3:1 (male:female).
- 16% (4031) of discharges from psychiatric hospitals included an alcohol related diagnosis, with this being the main diagnosis in 13%.

NHS Forth Valley (357 per 100,000 population) and NHS Tayside (522 per 100,000) are among the Health Boards with lowest alcohol-related discharge rates in 2005/06. For Forth Valley this value also decreased over time since 2001. Hence for 2005/06, discharges for both General and Psychiatric Hospitals were as follows (Figure 7):

*Figure 7. Alcohol-related discharges 2005/06*

| | *General hospital Discharges* | *Psychiatric hospital Discharges* | *Total for General & psychiatric* | *Percentage of total alcohol-related discharges (39061 + 4031)* |
|---|---|---|---|---|
| Acute intoxication | 7063 | 57 | 7120 | 16.5% |
| Harmful use | 11,181 | 799 | 11,980 | 27.8% |
| Alcohol dependency | 4379 | 2722 | 7101 | 16.5% |
| Alcoholic psychosis | 3873 | 452 | 4325 | 10% |

*1.2.3 Impact / morbidity data*

Impact or morbidity data can are vast and tend to have a ripple effect – i.e. the less direct the impact the less the harm, unless it meets other waves with a synergistic effect, creating bigger waves / impact.

Hepatitis & HIV:

A large proportion of individuals known to be Hepatitis B, Hepatitis C and / or HIV positive are injecting drug users. Health promotion and public health interventions appear to have had beneficial effects given that the prevalence of all diseases among injecting drug users (IDUs) have decreased over the past few years (ISD, 2006):

- In 2000, 1310 IDUs were Hep C +ve. By 2005 this decreased to 886. Despite fluctuations, similar downward trends are seen in NHS Fife, Forth Valley & Tayside Health Board areas. In drug users were the injecting status is not known, on the contrary, a slight upward trend is seen.
- Hepatitis B among IDUs is also showing a downward trend – from 89 cases (24.7% of all Hep B cases) in 2000, to 22 cases (5.9% of all Hep B cases) in 2005.
- HIV positivity also decreased among IDUs – from 21 cases in 2000 to 10 cases in 2005. Aids cases decreased from 16 to 4 cases respectively. In 2005, 3 of the new HIV cases were from NHS Tayside. NHS Tayside also contributed to 22% of the cumulative total since 1985.

Co-morbidity:

Studies on co-morbidity including the Scottish population are sparse. An epidemiological exercise by Baldacchino *et al* (2007) estimated the following data for co-morbidity levels. At a national level, 21% of the female and 32% of the male psychiatric treatment population were co-morbid. In the drug treatment population rates tend to be higher – i.e. 40% of males and 42% of females are co-morbid. The most common co-morbid combinations at national, regional and local levels were alcohol and depression, alcohol and anxiety and diazepam and anxiety.

Considering all the methodological limitations the estimated prevalence of co-morbidity in 2002 was 91.86 per 100,000 population (Baldacchino *et a,l* 2007).

Children & Families:

Drug and/or alcohol misuse by parents whose life is adversely affected to varying degrees, can have vast negative impact on children. In Scotland, an estimated 41,000 to 59,000 children are believed to be affected by drug abusing parents – i.e. 4-6% of all children under 16 years (ACMD, 2003).

Awareness of the longitudinal 'Hidden Harm' – from pregnancy onwards – is of utmost importance.

Accident & Emergency Data:

Alcohol was considered to be a contributory factor in 11% of all A & E attendances in Scotland. The busiest periods were Friday nights and the early hours of Saturday. A substantial number were intoxicated (23%0 and 53% had suffered an injury. 70% of all assaults attending A & E are alcohol-related (NHS Quality Improvement Scotland, 2006).

Social Harm:

The social harm related to drug and / or alcohol misuse is vast and difficult to measure accurately. Below are some indicators of social harm in Scotland:

- In 2005/06 police forces reported 6984 drunkenness offences – i.e. 14 per 10,000 population. A gradual declining trend can been seen since 1996. The values per police force area for Fife & Tayside respectively are 11 and 16 per 10,000 population (ISD 2007).
- Drunk-driving offences in 2005/06 amounted to 11,257 (22 per 10,000 population) – a very small decline since 1996/97 (11,771). Fife recorded 21 per 10,000 population and Tayside 26 per 10,000 population (ISD 2007).
- In 2004 there were a total of 30 fatal motor vehicle accidents and 710 motor vehicle accidents involving causalities, with the driver above legal limits (ISD 2007).
- 19% of homicides in 2005/06 were alcohol-related; 41% were drug related; and, 9% were both alcohol- and drug-related (ISD 2007).
- In 2005, the Scottish police forces recorded 43,150 drug-related offences – i.e. 847 per 100,000 population. This prevalence has risen by 19% since 2001. Interestingly, Sterling is the only area in Scotland seeing a steady decline from 973 in 2001 to 696 in 2005 per 100,000 population (ISD, 2006).
- Both drug and alcohol misuse are linked to social exclusion and social deprivation. The majority of drug misusers are unemployed or have never been employed. In 2006 only 12% were in employment. For patients under NHS Fife and Forth Valley, employment levels were similar to the National average – i.e. 11% - but only 8% of those under NHS Tayside were employed (ISD, 2006).
- The cost of alcohol-related problems for Scotland is around £1 billion a year (Scottish Executive, 2001).
- Cost due to lost productivity (premature mortality, unemployment or absenteeism) are around £405 milliion/year (Scottish Executive, 2001).