

## **Cost to Society of Alcohol Misuse in Scotland**

### **An Update to ‘Alcohol Misuse in Scotland Trends and Costs (Scottish Executive, October 2001)’**

**Note:** this paper follows publication of the original report, entitled ‘Alcohol Misuse in Scotland: Trends and Costs’ (Scottish Executive, October 2001). This report can be accessed at the webpage of **Alcohol Information Scotland**. Please see:

[http://www.alcoholinformation.isdscotland.org/alcohol\\_misuse/AI\\_HomePage.jsp?p\\_applic=CCC&p\\_service=Content.show&pContentID=1393&](http://www.alcoholinformation.isdscotland.org/alcohol_misuse/AI_HomePage.jsp?p_applic=CCC&p_service=Content.show&pContentID=1393&)

Alcohol misuse in Scotland has profound cost implications for both the NHS in Scotland directly, and to wider Scottish society.

Together with the costs incurred by the NHS, resource costs are borne by other services and groups. These groupings, which are detailed below, all contribute to the societal cost of alcohol misuse in Scotland. With the exception of Social work services, the resource costs incurred by these groups exceed the cost to the NHS.

- Social work services
- Criminal justice system and emergency services
- Wider economic costs
- Human costs

Source: ‘Alcohol Misuse in Scotland Trends and Costs’, Scottish Executive, October 2001

The cost imposed upon the NHS in Scotland at 2001/02 prices was £95.6 million, and the total cost to Scottish society was estimated to be £1.1 billion (*‘Alcohol Misuse in Scotland Trends and Costs’, Scottish Executive, October 2001*).

This short note provides some updated figures on these statistics, which reflect a more current picture of the scale of alcohol misuse in Scotland. Due to the difficulty in producing estimates of costs *outside the NHS*, the figures for all other resource groupings have been uplifted by inflation (from those figures quoted in the report of October 2001) and therefore demonstrate nominal increases only.

### **Key Results**

The table below shows a breakdown of the total cost to society of alcohol misuse for 2002/03, the year for which latest data is available.

**Table 1 - Summary of the Annual Costs of Alcohol Misuse : 2002/03**

<b>Resource Category</b>	<b>2001/02 Annual Cost (£ million)</b>	<b>2002/03 Annual Cost (£ million)</b>
NHS Scotland	95.6	<b>110.5</b>
Social Work Services	85.9	96.7
Criminal Justice + Emergency Services	267.9	276.7
Wider Economic Costs	404.5	417.8

Human Costs	216.7	223.8
<b>Total Cost to Society</b>	<b>1070.6</b>	<b>1125.5</b>

The main points to note are:

- The cost to the NHS in Scotland of alcohol misuse has increased, in real terms, from £95.6 million to £110.5 million. This represents a rise in cost of 16%.
- The ‘wider economic costs’ is the most significant resource group accounting for around £417.8 million. These costs include factors such as working days lost due to alcohol-related absenteeism.
- The cost to society as a whole has appreciated in nominal terms, from £1.07 billion to around £1.13 billion. This equates to a 5.6% rise in the cost to society of alcohol misuse.

#### **Assumptions used:**

- Basic calculation uplifts expenditure figures by economy (GDP) inflation for all resource groupings (with the exception of the NHS). Therefore increases are nominal.
- The calculation of NHS costs incorporates the changes in activity such as GP consultation and hospitalisation days
- The cost estimates for those occurring outwith the Health service should be treated with caution. Much of these are based on findings from research papers taken from the ‘*Alcohol Misuse in Scotland Trends and Costs*’ report, rather than any robust statistics. For example, under Social Work Services the original report assumed that 24% of total expenditure is as a result of alcohol misuse. The same assumption has been applied to the updated estimate for this resource category.
- The methodology which was used in calculating costs for the non-NHS resource groupings is explained in the report ‘*Alcohol Misuse in Scotland Trends and Costs*’ (*Scottish Executive, October 2001*).

#### **Detailed Breakdown of NHS Scotland Costs**

Table 2 overleaf details alcohol-attributable costs incurred by specific resources within the NHS in Scotland.

Costs are borne by both the primary care sector – in terms of GP resources and community prescribing – and by the secondary care sector, where the majority of costs are accrued through bed days taken up (that is, hospitalisation days).

NHS resources are also utilised through direct targeting of resources for alcohol-specific services. These are allocated through the 15 Health Boards or via NHS Health Scotland (the special Health Board dealing with public health issues). Funding is also directed towards the Information & Statistics Division (ISD) of the NHS. ISD employs public health doctors, and

runs the National Alcohol Information Resource (NAIR). The NAIR provides alcohol-related statistics, research and practice guidelines.

**Table 2 - Summary of the Annual Costs of Alcohol Misuse incorporating NHS volume changes: 2002/03**

<b>Health service resource use associated with:</b>	<b>Annual resource use 2002/03</b>	<b>% Resource increase 2001/02 - 2002/03</b>	<b>Annual Cost (£ million)</b>
GP consultations	246,694 GP consultations	22.2	4.4
GP-prescribed drugs	Based on drug usage (Disulfiram + Acamprosate calcium)	N/A	0.6
Laboratory tests	171,744 laboratory tests	22.2	2.2
Hospitalisation days	284,469 hospital days	6.6	57.9
A & E attendances	183,138 attendances	9.4	10.5
Outpatient visits	97,341 visits	7.4	8.7
Day hospital attendances	59,974 attendances	6.5	3.3
Community psychiatric team visits	8% of total comm. Psychiatric team expenditure	85	7.4
Ambulance responses	64,044 ambulance responses	11	10.1
NHS Health Scotland; ISD; Scottish Executive & Health Board funding	“Drinkwise” Media Campaign; NHS Health Scotland Resources; ISD NAIR; Alcohol Development Officers	50	2.1
Health Board expenditure to alcohol-related voluntary organisations; Scottish Executive funding to Alcohol Focus Scotland	Health Board allocations to Alcohol Action Teams; Executive allocation to national alcohol charity	400	3.24

<b>Total cost to NHS Scotland of Alcohol misuse</b>		<b>16</b>	<b>110.5</b>
---	--	-----------	--------------

Again, the main points to note are:

- For all NHS resource groups, the costs associated with alcohol misuse have grown, at a rate higher than inflation, from 2001/02 to 2002/03. This reflects the increasing extent of alcohol misuse in Scotland, and the consequent burden placed upon the NHS.
- Hospitalisation days as a result of alcohol misuse account for 53% (£57.9 million) of the total of £110.5 million NHS cost. There has been a 6.6% rise in costs associated with this resource.
- Several of the NHS resource groups show large percentage rises in costs associated with alcohol misuse. These figures are to be treated with caution, as this in part reflects changes from a small volume base (which show up as large % increases).
- The 400% growth in Health Board expenditure to alcohol-related voluntary organisations is explained by the provision of *new funding* to address alcohol misuse at the local level.

Appendix 1 overleaf explains how individual resource costs were derived.

## Appendix 1

### 1. GP consultations

The total figure of 246,694 GP consultations includes figures from ISD Scotland. These are drawn from the Continuous Morbidity Recording (CMR) measured rates, which show that 85,872 consultations were for causes directly attributable to alcohol. Also included are 160,822 consultations that are indirectly attributable to alcohol misuse. The indirect figures were calculated using risk rates associated with excess consumption, in combination with estimates of how many people consume alcohol at these levels.

### 2. GP-prescribed drugs

Disulfiram and Acamprosate calcium are the two most commonly dispensed drugs for alcohol misuse. 2002/03 gross ingredient costs stood at: Disulfiram, £191,195, and Acamprosate calcium, £333,866. However, some drugs (such as diazepam) are given to treat alcohol withdrawal symptoms, but also have other non-alcohol related dispensing uses. Thus the cost estimate of £0.6 million is likely to understate the true cost of GP-prescribed drugs.

### 3. Laboratory tests

The figure of 171,744 ( $85,872 * 2$ ) laboratory tests is derived by assuming that there were the same number of haematology and biochemistry tests as there were number of GP consultations (85,872) that were directly attributable to alcohol misuse.

### 4. Hospitalisation days

In order to calculate the £57.9 million resource cost, a cost per day was calculated and applied to the number of bed days for non-psychiatric and psychiatric bed days stratified by alcohol-related ICD codes. This cost was also applied to the number of bed days indirectly attributable to alcohol misuse. The “indirect” figures were calculated using estimates of the numbers of people estimated to be consuming excessive levels of alcohol. The total number of hospitalisation days accounted for by alcohol misuse was estimated to be 284,469.

### 5. A & E attendances

The £10.5 million sum utilises a cost per A & E attendance of £57 (ISD, 2003), and attributes 12% of A & E attendances as being alcohol-related (Pirohamed et al, 2000).

### 6. Outpatient visits

The gross number of outpatient visits, 97,341, is a combined psychiatric plus non-psychiatric total. This results in a total resource cost of £8.7 million. Numbers of outpatient visits are calculated using combinations of alcohol-related resource statistics. For example, it is

estimated that 3% of all GP psychiatric conditions arise from alcohol misuse (Office of Health Economics, 1999), and that 13% of all psychiatric inpatient episodes in Scotland are due to alcohol misuse (ISD, 2001).

#### 7. Day hospital attendances

The day hospital attendance figure of 59,974 has been calculated by taking estimates of the number of day patient episodes that were as a result of alcohol misuse. This results in a resource cost of £3.3 million.

#### 8. Community psychiatric team visits

8% of the total community psychiatric expenditure for 2002/03 of £91.9 million (ISD, 2003) is assumed to be as a direct consequence of alcohol misuse. This follows the assumption of “Alcohol Misuse in Scotland Trends and Costs” (Scottish Executive, October 2001). The resulting resource cost is £7.4 million.

#### 9. Ambulance journeys

In 2002/03 there were 533,693 ambulance responses (ISD, 2003). 12% of these were assumed to be alcohol-related (Pirohamed et al, 2000). Thus, 64,044 responses at a cost per response of £157.61 results in a resource cost of £10.1 million.

#### 10. Health promotion/prevention<sup>1</sup>

The resource use of £2.1 million can be broken down by: commitments from NHS Health Scotland to fund the “Drinkwise” media advertising campaign (£425,000); the salary provision, of £1 million, to alcohol development officers, and the provision of circa £300,000<sup>2</sup> to fund the NAIR at ISD. Overheads such as administration are also included in the overall figure.

#### 11. Alcohol-related voluntary organisations & Alcohol Focus Scotland

This resource category constitutes £3.24 million of funding. £3 million of additional resources for alcohol action teams (AATs) has been allocated. The Scottish Executive also provides a core annual grant to Alcohol Focus Scotland, of £0.24 million.

**Health Economics Unit, ASD: HD**  
**Scottish Executive**  
**12<sup>th</sup> July 2004**

---

<sup>1</sup> Items 10 and 11 are expenditure items, as opposed to cost-incurred resources. However, they have been attributed in the publication “Alcohol Misuse in Scotland Trends and Costs” (Scottish Executive, October 2001) as costs to the NHS in Scotland. Therefore, for consistency these resource groups are included here.

<sup>2</sup> The final funding allocation to the NAIR has not been confirmed. The £300,000 is therefore a provisional figure.