Publication Report

ISD SCOTLAND

NHS National Services Scotland

Alcohol-related Hospital Statistics Scotland 2013/14

NATIONAL STATISTICS

Publication date – 25 November 2014

A National Statistics Publication for Scotland

Contents

Introduction

Excessive consumption of alcohol can result in a wide range of health problems. Some may occur after drinking over a relatively short period, such as acute intoxication (drunkenness) or poisoning (toxic effect). Others develop more gradually, only becoming evident after long-term heavy drinking, such as damage to the liver and brain. In addition to causing physical problems, excessive alcohol consumption can lead to mental health problems such as alcohol dependency.

The information reported in this publication is based on hospital data from ISD General Acute Inpatient / Day cases Records (SMR01; see Appendix A1 for further information on this dataset). Information on the Mental Health Inpatient and Day Case Records (SMR04) that in the past was part of this publication is no longer included and will be published later in the Alcohol section on the ScotPHO website.

Previous annual reports have focused on continuous inpatient stays (CIS) for alcohol-related conditions, and were referred to as 'discharges'. For clarity, in this year's report these are referred to as 'stays'. This year's report shows three major improvements:

- As well as adding the latest data (for 2013/14), it also shows a much longer time trend than has been provided in the past with figures going back to 1981/82;

- The reporting on numbers of patients having stayed in hospital each year has been expanded;

- Newly included is the number of "new" patients admitted to hospitals (defined as not having been hospitalised for an alcohol condition in the previous 10 years).

The purpose is to provide additional indicators that give a fuller picture of health service use (see Note of Revisions in Appendix A1 for further background). Figures are broken down in various ways; by age, gender, deprivation and area of residence (NHS Board – using the 2014 boundaries - and council area). To allow comparisons between geographical areas that may be different in size and age structure of the population, many of the figures are also presented as European age-sex standardised rates (EASR). Since publication of 2012/13 data in February 2014, this series of reports have used the 2013 European Standard Population (ESP2013) to calculate European Age-Sex Standardised Rates (EASRs) for all years (including those before 2012/13). Therefore, findings from the 2012/13 and 2013/14 publications are not comparable with previous ISD reports.

As in all previous publications, figures for the latest year (2013/14) are as yet provisional and subject to minor changes due to data incompleteness. At the time of extraction from the SMR01 database the number of hospital episodes was regarded 98.4% complete, but this is around 1% lower than anticipated due to a known data backlog from NHS Highland. This NHS board has moved to a new data management system and has therefore not been able to submit data to SMR01 since January 2014, resulting in a board-level completeness of 76%. The impact on the Scotland-level figures is small but will need to be taken into account when interpreting any 2013/14 figures in relation to previous years.

Key points

- In 2013/14, there were 36,206 alcohol-related stays in a general acute hospital in Scotland. This is equivalent to a standardised rate of 696.9 stays per 100,000 population. This is almost identical to the previous year, which had 36,115 alcohol-related stays; a rate of 697.0 stays per 100,000 population.

- The rate for alcohol-related stays was lowest in 1982/83 with 152.8 stays per 100,000 population. This increased sharply to a peak of 855.7 stays per 100,000 population in 2007/08, a more than five-and-a-half-fold increase. At an individual level, the patient rate increased more than 4 times from 133.9 patients per 100,000 in 1982/83, to 578.3 patients per 100,000 in 2007/08. The increases were more prominent in older age groups. Since 2007/08, rates for both stays and patients have decreased; stays by 19% and patients by 20%.

- The rate of patients discharged from hospital with an alcohol-related diagnosis for the first time was relatively stable from around 1997/98 to 2007/08, and has subsequently decreased. The increase in hospital stays seen up to 2007 has been driven to a large extent by repeat visits in previous patients rather than new patients presenting to hospital. Although the younger age groups made a substantial contribution to the increasing rates of new hospitalised patients, the older age groups contributed far more to the increasing numbers of stays and present the largest burden on the hospital system.

- In 2013/14, the hospital stay rate was 8.4 times greater for patients living in the most deprived areas compared to those living in the least deprived areas. In the most deprived areas the rate of individual patients with an alcohol related diagnosis was 7.5 times higher and the new-patient rate was 4.7 times higher compared to the least deprived areas. However, differences have decreased over the period 2001/02 to 2013/14, because the rates in the most deprived areas dropped more markedly than in the least deprived, where rates changed very little.

Results and Commentary

Definitions

Hospital activity data are routinely drawn from hospital administrative systems across all NHS hospitals in Scotland. General Acute Inpatient and Day Case information is collected in a dataset called SMR01 (Scottish Morbidity Record 01). This is an episode-based patient record relating to all inpatient and day cases discharged from specialities other than mental health, maternity, neonatal and geriatric long stay specialities. The figures shown in this report result from analysis of the data collected in SMR01. More information on SMR01 can be found in Appendix A1.

For this report, we define a hospital stay (also described as a continuous inpatient stay or CIS), as an unbroken period of time that a patient spends as an inpatient or day-case. During a stay a patient may have numerous episodes as they change consultant, significant facility, speciality and/or hospital. Stays are counted at the point of discharge, when all diagnostic information regarding the full stay available. Therefore a 'stay' and a 'discharge' are equivalent in this report.

Where numbers of patients are reported, this refers to the number of unique individuals treated within the financial year. Patients are counted only once in the financial year in which they have an alcohol-related stay, even though the same patient may be admitted to hospital several times in a year.

New patients are defined as patients who have not been previously admitted to hospital with an alcohol diagnosis within the last 10 years. If a patient has several alcohol-related stays over a number of years, this patient will be counted only in the year of the first alcohol-related hospital stay.

To allow comparisons between geographical areas that may be different in size and age structure of the population, many of the figures are also presented as rates (typically per 100,000 population) and are standardised to a European standard population. We are now routinely using the new European standard population (ESP2013), as introduced throughout the UK in 2014, which reflects ageing of the European population and has resulted in slightly higher rates for many alcohol-related conditions compared to the previous (1976) European standard population. The impact of the ESP revision is illustrated in more detail in the Revision of the European Standard population section in Appendix A1.

Number of hospital stays

In 2013/14, there were 36,206 alcohol-related stays recorded in SMR01 so far for patients resident in Scotland; resulting in an EASR of 696.9 stays per 100,000 population (Excel table S1). This is virtually the same as in the previous year (2012/13), when there were 36,115 alcohol-related stays (an EASR of 697.0 stays per 100,000 population). Note that there is a slightly larger backlog of data than usual at this time for the latest year (2013/14) due to a known data deficit (see Appendix A1 – Data Quality & Completeness).

The EASR for alcohol-related stays has increased from the lowest recording in the time series, which was in 1982/83, of 152.8 stays per 100,000 population to a peak of 855.7 stays overall per 100,000 population in 2007/08, a more than five-and-a-half-fold increase in both males and females (Fig 1 and S1). The absolute number of stays increased more than six-fold from 7,078 (overall) in 1982/83 to 43,053 in 2007/08. Between 2007/08 to

2013/14, the alcohol-related stays EASR fell by 19% for men overall (from 1,249.6 to 1,013.3 per 100,000; to an absolute number of 25,729) and by 18% for women (from 461.7 to 380.5 per 100,000; to an absolute number of 10,477) (Fig 1 and S1).

Fig 1. European age-standardised rates per 100,000 population[1] (based on ESP2013[2]); hospitalisations with an alcohol-related diagnosis – stays, by gender; financial years 1981/82 to 2013/14[P]
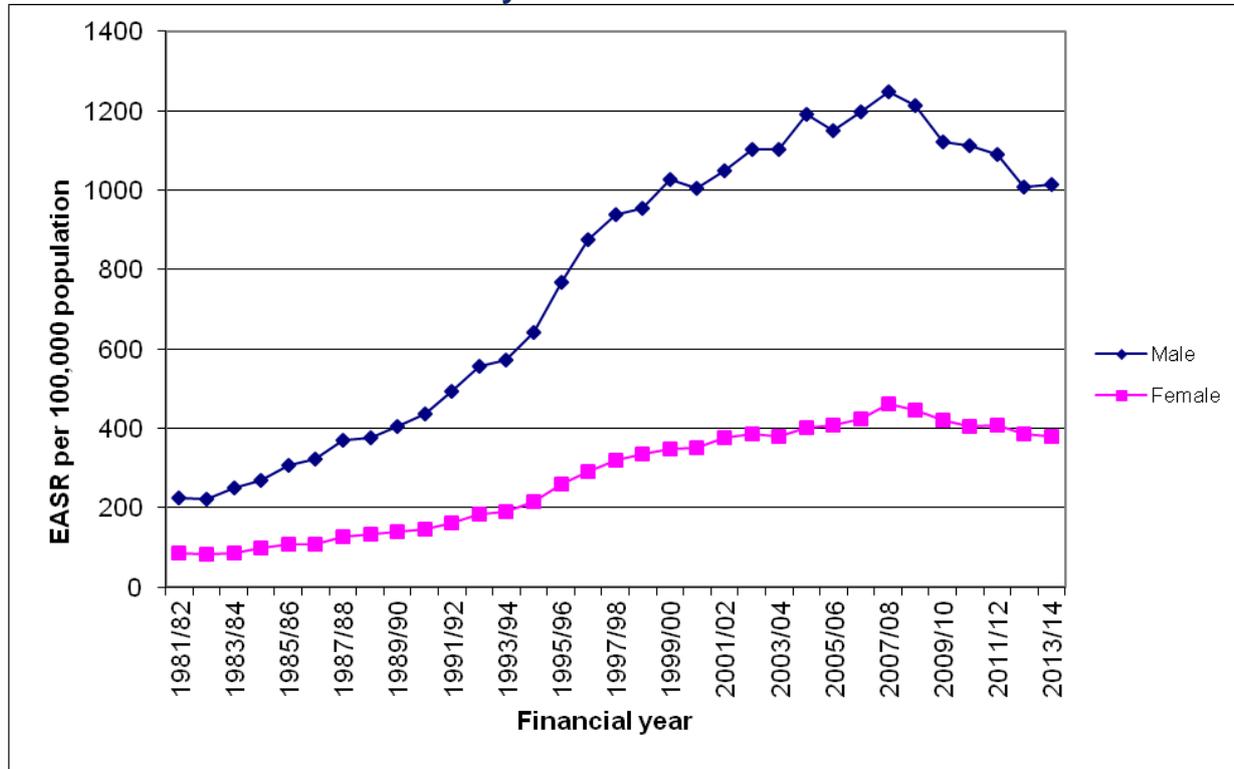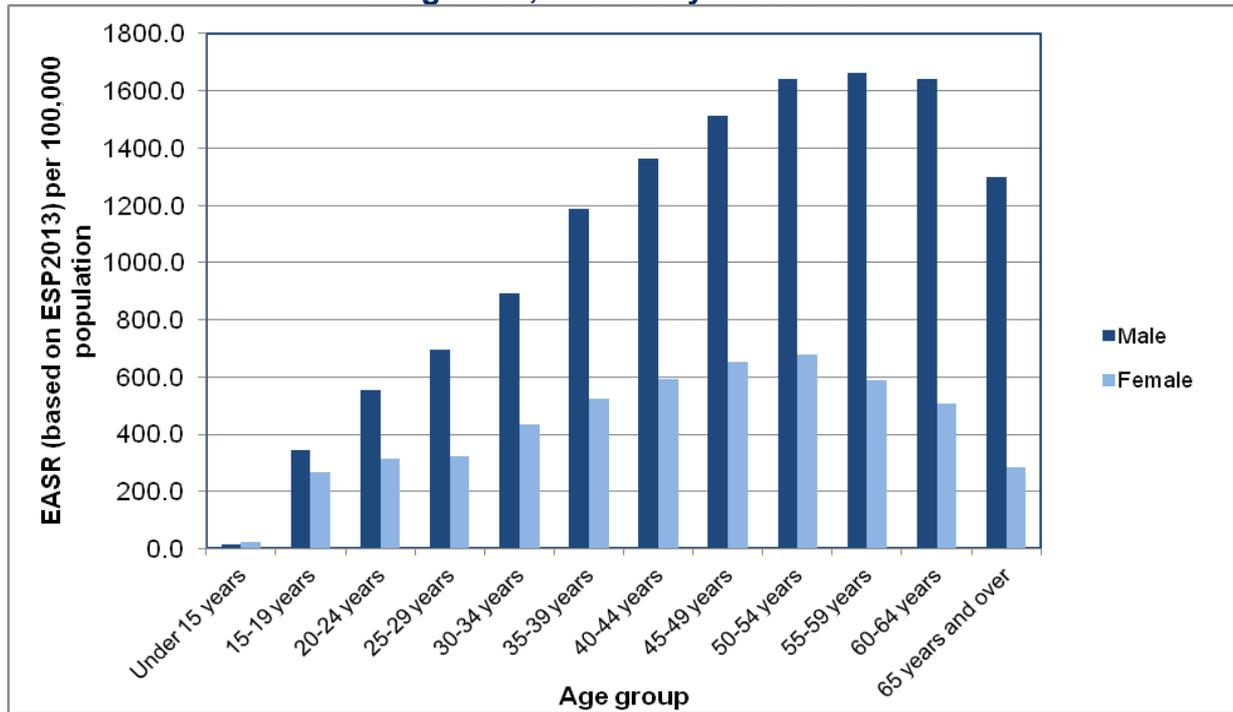

1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Age-Standardised Rate (EASR) per 100,000 population is calculated using the 2013 European Standard Population (see Appendix A1 for more information).
[P] Provisional; the 2013/14 figures will increase slightly in future publications due to a known current data deficit issue.

Differences between males and females generally increased with age (Fig 2); in the latest year (2013/14), in patients aged 65 and over, the male stay rate was 4.6 times higher than in females. Overall, 71% of alcohol-related stays were in males. For males, the alcohol-related stay rate was highest in the 55-59 years age group in 2013/14, whereas for females the rate was highest in the 50-54 age group. Only in the youngest age group (under 15) the alcohol-related stay rate was slightly lower in males compared to females, but note these rates are based on very small numbers. Time trends for all age groups, for both genders and males and females separately, are also shown in the interactive Excel table S1. Combining both genders, the largest increases in stay rates over time were seen in the 50-54 year age group, although for males the peak in stay rates was highest for the 60-64 year age group, whereas for females the peak was highest for the 45-49 year age group.

The alcohol-related stay rates in 2013/14 were similar to the previous year (2012/13) in most gender-age subgroups (Table S1). Although some changes appeared sizeable, eg in females aged 30-34 (a drop from 479.1 to 433.7 per 100,000) and 35-39 (a drop from 563.3 to 525.3 per 100,000); or in males aged 35-39 (an increase from 1,084.4 to 1,185.6 per 100,000) these changes were not statistically significant.

5

Fig 2. European age-standardised rates per 100,000 population[1] (based on ESP2013[2]); hospitalisations with an alcohol-related diagnosis – stays, by age group and gender; financial year 2013/14[P]

1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Age-Standardised Rate (EASR) per 100,000 population is calculated using the 2013 European Standard Population (see Appendix A1 for more information).
P Provisional; figures will increase slightly in future publications due to a known current data deficit issue.

Number of patients

The long-term time trend for patient rates broadly followed the same trend as the stay rates. From the lowest point of 133.9 per 100,000 in 1982/83 the patient rate increased more than 4 times to 578.3 per 100,000 in 2007/08, to then decrease to 464.8 per 100,000 in 2013/14 (a 20% decrease). Different age groups didn't all follow the same trend; for example the 60-64 year old male rates peaked in 2004/05, and for 35-39 year old females the rates peaked in 2010/11 (Excel sheet S1). In recent years the highest patient rates in females were in the 45-49 and 50-54 year old age groups, whereas in males the highest rates were seen in the 50-54, 55-59 and 60-64 year old age groups. In most age-gender groups the rates in 2013/14 were similar or slightly lower than in the previous year (2012/13).

Excel table S3 shows the ratio of number of stays divided by number of patients for 2013/14 by age group and gender, and it can be seen that the number of stays per patient is highest in 40-44 year old males. When the same calculation was done for the full time trend (figures not shown) the ratio increased from around 1.1 in 1981/82 to 1.5 in 2013/14 (overall), so the number of stays per patient per year has increased.

Number of new patients

The alcohol-related new-patient rates show a somewhat different trend compared to the stay rates and patient rates. The new-patient rate changed very little from around 1997/98 to 2007/08, for both males and females. Since then rates have decreased for both males and females (Excel sheet S1). This pattern is not necessarily repeated within gender-age

groups; for example the new-patient rates for the under 15 age group have been decreasing ever since the late nineties; in 60-64 year olds new-patient rates rose up to 2004/05 and then started to decline, and the new-patient rates for the 15-19 and 20-24 year olds followed a more erratic pattern peaking in 2007/08 for both males and females. New-patient rates in females were generally highest in the 15-19 year old age band, and the 20-24 year olds were also strongly represented. In males the differences between age groups were relatively smaller, with the 60-64 year olds generally having the highest new-patient rates although in recent years the 20-24 year olds also had high new-patient rates.

The ratio that can be calculated between 'patients' and 'new patients' (not shown) has increased over the years from around one-and-a-half in 1991/92 to two in 2013/14. This suggests that the increased workload reflected by the rising numbers of patients is increasingly due to re-admissions rather than due to newly diagnosed patients.

General trend from 1981/82 to 2013/14

Fig 3 shows the EASRs for alcohol-related stays (discharges) and patients for the time period from 1981/82 to 2013/14, and new patients (based on a 10-year look-back, and therefore calculated back to 1991/92) (see also Excel table S2).

Fig 3. European age-standardised rates per 100,000 population[1] (based on ESP2013[2]); hospitalisations with an alcohol-related diagnosis – stays, patients and new patients; financial years 1981/82 to 2013/14[p]
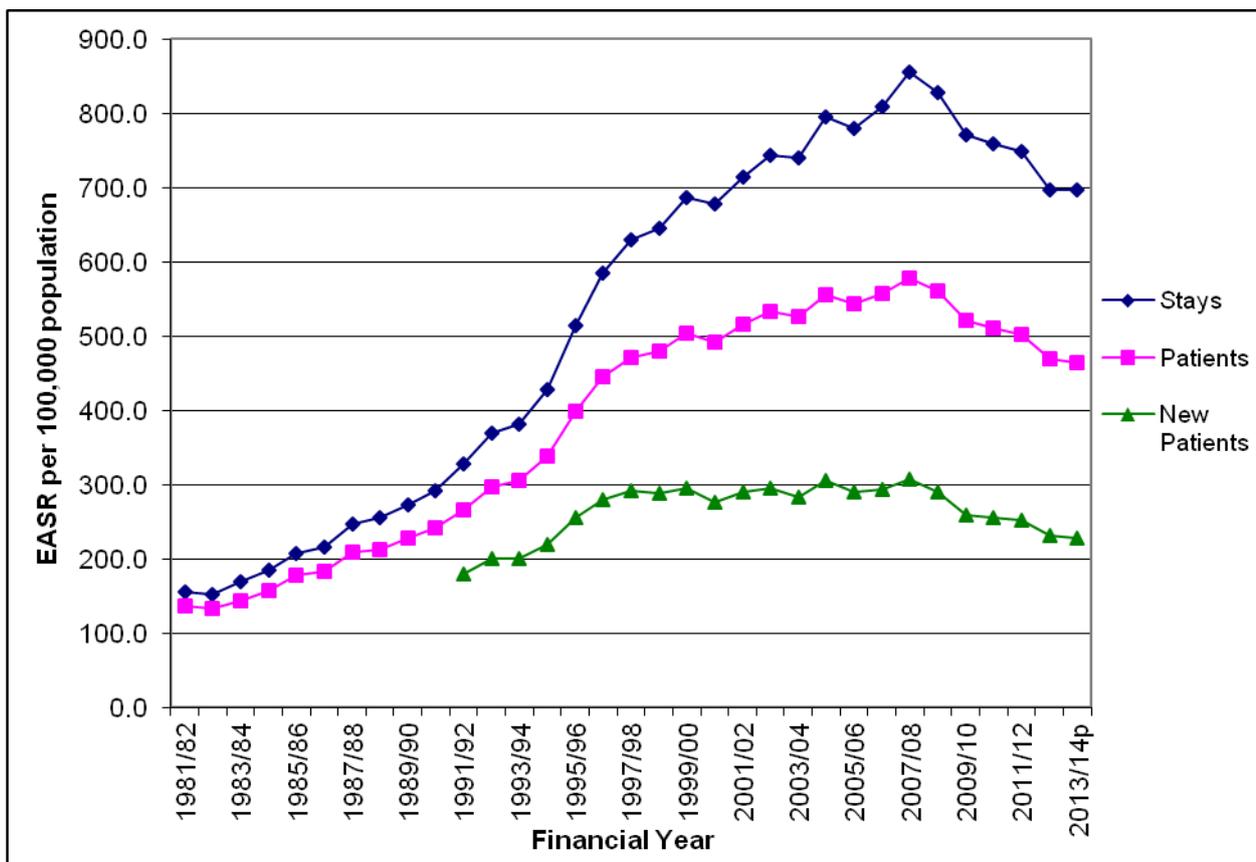
1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Age-Standardised Rate (EASR) per 100,000 population is calculated using the 2013 European Standard Population (see Appendix A1 for more information).
P   Provisional; figures for 2013/14 will increase slightly in future publications due to a known current data deficit issue.

The EASR for alcohol-related stays has increased from the lowest recording in the time series, which was in 1982/83, of 152.8 stays per 100,000 population to a peak of 855.7 stays per 100,000 population in 2007/08, a more than five-and-a-half-fold increase, and subsequently decreased again to 696.9 stays per 100,000 population in the latest year (2013/14; a decrease of 19%). Despite the recent decrease, the EASR in the latest year (2013/14) was still more than four-and-a-half times higher than at its lowest point (in 1982/83).

The patient rate has followed a very similar pattern to the rate of hospital stays and also peaked in 2007/08 to decline after that. The patient rate was 3.5 times higher in 2013/14 compared to the lowest recording in these time series (in 1982/83; Fig 3). The new-patient rate, show an initial sharp rise but changed very little from around 1997/98 to 2007/08. Since then the rate has been declining and is now at a level similar to 1994/95.

The rates of patients presenting each year and stays are much higher than the new patient rates, and have increased (and decreased) at a far greater rate. Currently (2013/14) the overall burden of alcohol-related hospitalisations is made up of around a third completely new hospital patients, a third patients from previous years being re-admitted and a third repeat stays within the year. By contrast, in 1991/92 around half of hospitalisations were completely new patients and the rest were repeat stays within the year or in patients who had been hospitalised in previous years. This indicates that the increase in hospital stays seen up to 2007 has been driven to a large extent by repeat visits in previous patients rather than new patients presenting to hospital. Although the younger age groups made a substantial contribution to the increasing rates of new hospitalised patients (particularly for women), the older age groups contributed far more to the increasing numbers of stays and present the largest burden on the hospital system.

## Stays with specific alcohol-related diagnoses

During 2013/14, the most commonly recorded specific diagnoses relating to stays for alcohol misuse were harmful use (10,174 stays, equating to an EASR of 197.3 stays per 100,000 population) and acute intoxication (9,070 stays; an EASR of 173.3 stays per 100,000 population) (see Excel table S6 and S7). These diagnoses dominate particularly in the youngest age groups and are relatively less common in older age groups, although the absolute number of discharges for these diagnoses is higher in older age groups. Other common diagnoses resulting in hospital stays (particularly in older age groups) were alcoholic liver disease (6,623 stays), alcoholic psychoses (6,173 stays) and alcohol dependence (5,090 stays).

Excel table S6 shows that differences between genders and age groups vary between conditions; for example stays for alcohol psychoses are 3.4 times more common in males compared to females, whereas stays for alcoholic liver disease are 2.2 times more common in males compared to females. Acute intoxication is in males more common in older age groups rather than younger (27% of stays are in the over 60 age group vs 13% in the under 25s) whereas in females acute intoxication is relatively more common in younger age groups compared to males (19% of stays are in the over 60s vs 18% in the under 25s). Alcoholic liver disease however tends to increase with age in both genders.

The trends in EASR over time for stays and patients show for many of the individual conditions a similar pattern to the rates for all alcohol-related conditions, with a rise up until 2007/08 followed by a decline, with some notable exceptions (S7). For example, the rate for alcohol dependence stays does not show a consistent decline. The trend for stay rates for alcoholic liver disease shows a much flatter curve than for alcohol-related conditions overall, and the curve for alcohol psychosis stays shows a long-term upward trend and no

clear decline in recent years. This is also the case for cirrhosis of the liver. Figure 4 illustrates the trends in stay rates for four conditions; harmful use, alcoholic liver disease, alcohol psychoses and cirrhosis.

Fig 4. European age-standardised rates per 100,000 population[1] (based on ESP2013[2]); hospital stays for four alcohol-related conditions (harmful use, alcoholic liver disease, alcohol psychoses, cirrhosis); financial years 1996/97 to 2013/14[P]
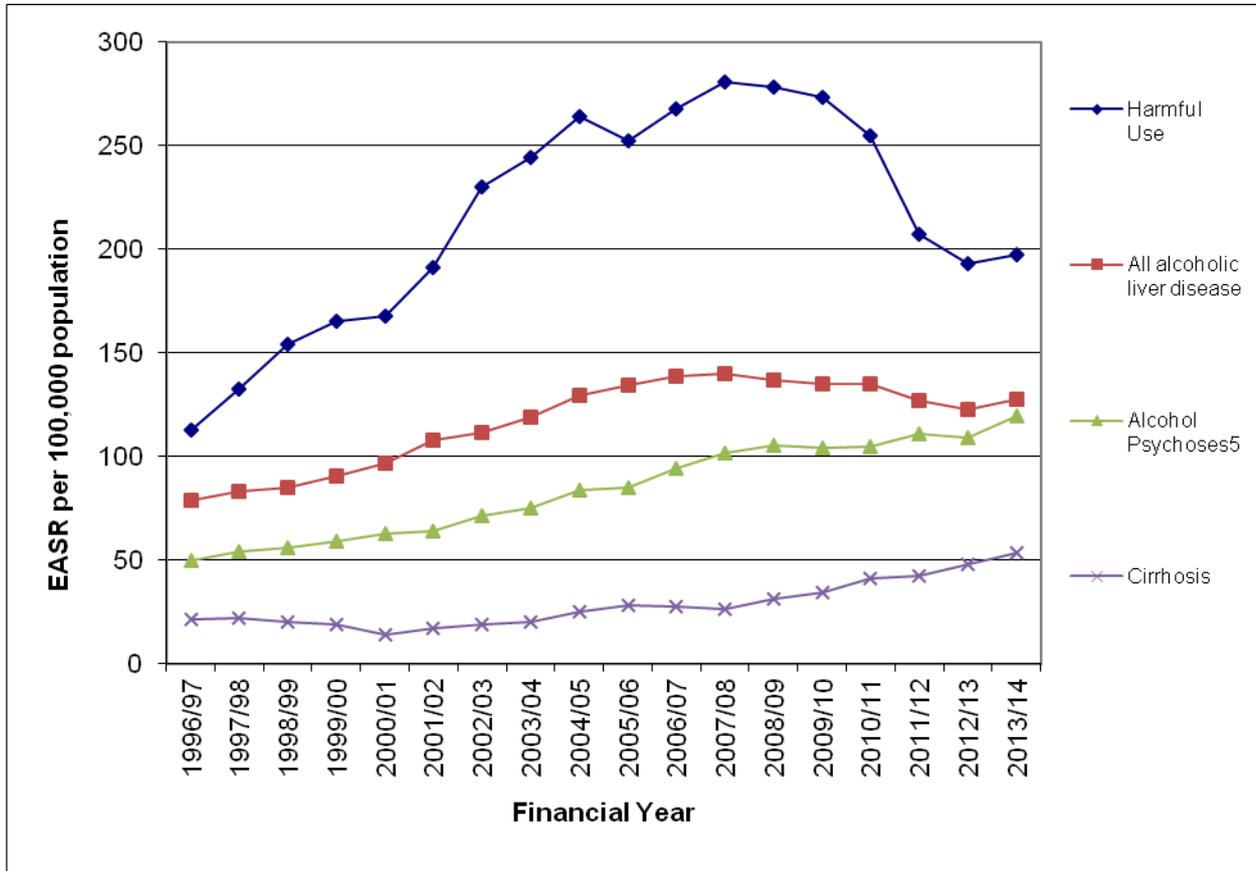
1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Age-Standardised Rate (EASR) per 100,000 population is calculated using the 2013 European Standard Population (see Appendix A1 for more information).
P   Provisional; figures for 2013/14 will increase slightly in future publications due to a known current data deficit issue.

Excel table S8 also gives the option to break down the stay, patient and new-patient rates for each diagnosis by individual age group. This shows, for example, that in earlier years the age group most commonly involved in hospital stays for acute intoxication was the 15-19 year olds, whereas in recent years the stay rates for acute intoxication in this age group were lower than for most other age groups.

Deprivation effects

In 2013/14, the rate of new patients hospitalised for alcohol-related conditions was 4.7 times greater for patients living in the most deprived areas (decile 1of the Scottish Index of Multiple Deprivation or SIMD) compared to those living in the least deprived areas (decile 10); 490.5 compared to 103.7 per 100,000 (Excel table S10 and Figure 5). The difference has decreased over the 13 years from 2001/02 to 2013/14, with the rate in 2001/02 being six times greater in the most deprived areas (664.9 per 100,000) compared to the least deprived (110.0 per 100,000).

9

Fig 5. European age-standardised rates per 100,000 population[1] (based on ESP2013[2]); new patients hospitalised with an alcohol-related diagnosis; by deprivation (SIMD) decile; financial years 2001/02 to 2013/14[p]
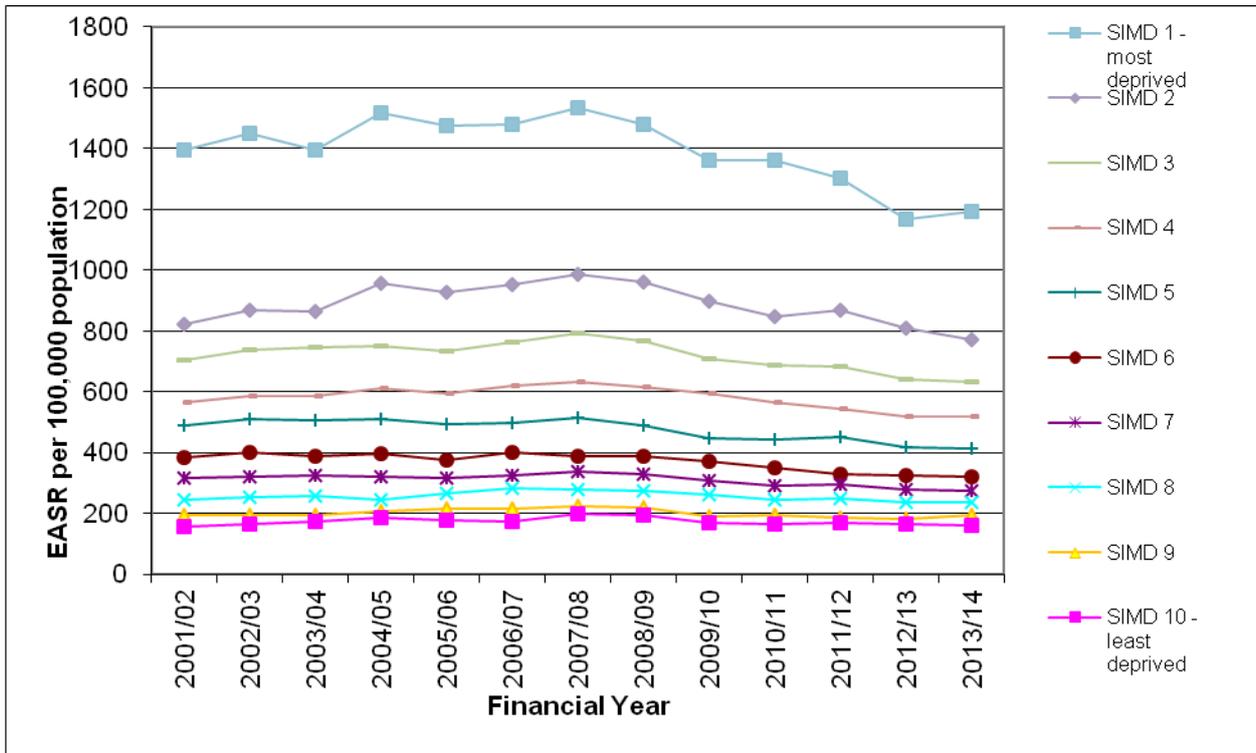

1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Age-Standardised Rate (EASR) per 100,000 population is calculated using the 2013 European Standard Population (see Appendix A1 for more information).
[p] Provisional; figures will increase slightly in future publications due to a known current data deficit issue

The most deprived decile also showed the largest drop in new-patient rates from 2001/02 to 2013/14; from 664.9 per 100,000 population in 2001/02 to 490.5 per 100,000 population in 2013/14 – a drop of 26%. The least deprived quintile showed a drop of just 6% (from 110.0 to 103.7 per 100,000 population).

Similarly, the most deprived category also had the highest patient rates in 2013/14; rates were 7.5 times higher for the most deprived compared to the least deprived decile (the ratio was 8.7 for males; 5.4 for females). Across all 13 years (2001/02 – 2013/144) the hospital stay rates were approximately eight to ten times greater for patients living in the most deprived areas compared to those living in the least deprived areas. Since the peak in 2007/08, the stay rate dropped relatively more in the most deprived decile (by 21%) compared to the least deprived decile (a drop of 14%).

Admission types

Of the 36,206 alcohol-related stays in Scotland during 2013/14, 92% resulted from an emergency admission (S11). This varied between age groups with younger patients more commonly being admitted as an emergency compared to older patients. The percentage admitted as emergency varied between NHS Boards between 84% and 98%, except for NHS Orkney where the proportion resulting from emergency admissions was recorded at just 48% (due to a very small number of patients having a very large number of planned admissions).

Sunday was the day of the week with the highest number of alcohol-related emergency admissions, with 5,305 emergency admissions, although the variation in numbers is relatively small across all the days (Excel table S11 and Figure 6).

Fig 6. Distribution of general acute inpatient and daycase admissions with an alcohol-related diagnosis per age group; by day of the week (2013/14)
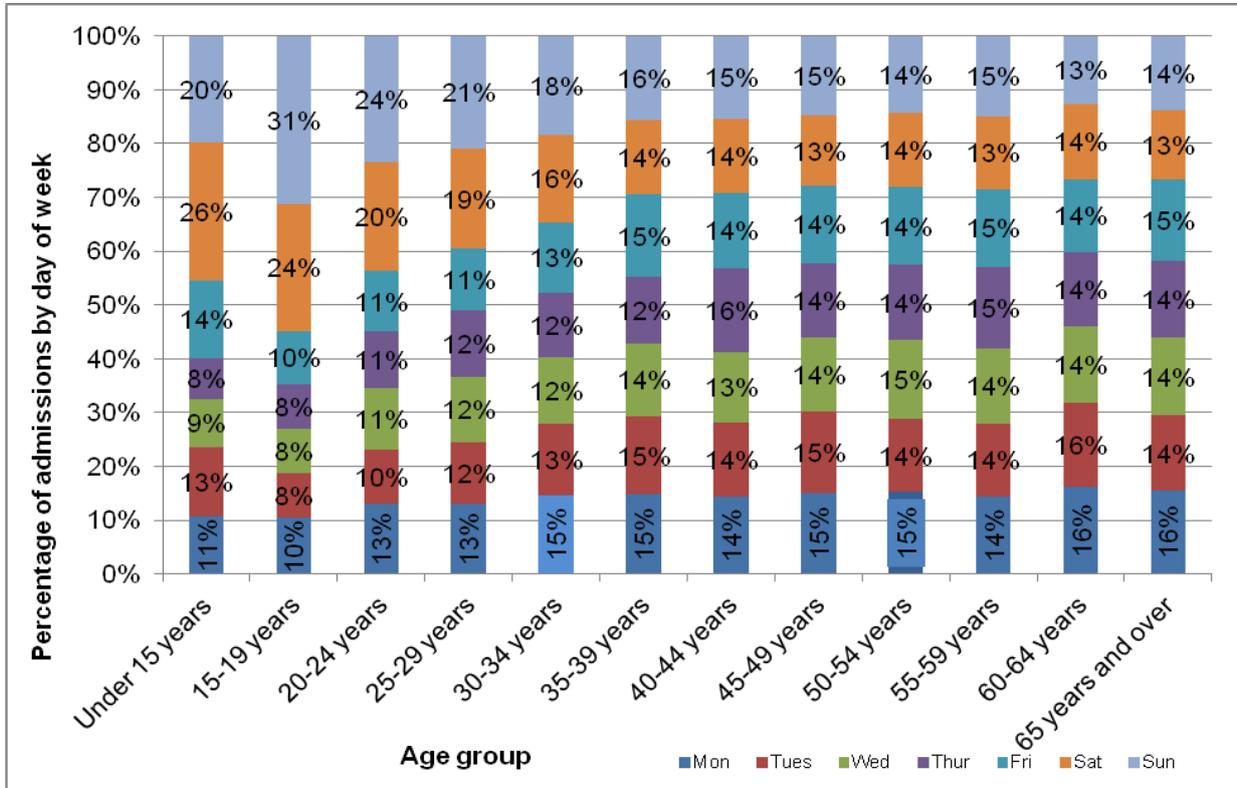
However, the number of admissions on Saturday and Sunday was much higher than on week days in the youngest age groups, with 55% of admissions of patients aged 15-19 taking place on Saturday and Sunday. In older age groups (35 and over) the admission rates by day of the week showed little variation and admissions on Saturday and Sunday were close to two-sevenths of the total (even slightly lower for patients aged 60-64, or over 65).

Geographical profile

Trends observed in Scotland overall are generally roughly repeated in local areas (NHS Board areas and local council areas), although often showing some more erratic patterns. Interactive Excel sheets S4 and S5 show the alcohol-related hospital stay, patient and new-patient rates for local areas. Note that no figures are shown for Highland board or council area in 2013/14 due to a 24% data backlog caused by a system change. Some areas that do show a somewhat different pattern include South Lanarkshire council area and NHS Forth Valley; where the drop in the alcohol-related hospital stay rate does not seem to have been sustained. Note that in this publication 2014 NHS Board boundaries have been used.

Excel sheet S9 shows the number and rates of hospital stays for alcohol-related conditions by diagnosis for each NHS Board and Council area for the financial year 2013/14. The EASRs for alcohol-related stays (overall) are published in the ScotPHO Alcohol Profiles, which gives an easier to use tool to compare local areas.

11

Glossary

Alcohol-related diagnosis	This refers to conditions known to be a direct consequence of alcohol consumption. Codes used in the analyses are provided in Appendix A1.
Stay, or Continuous Inpatient Stay (CIS)	This refers to a continuous period of health care in a hospital setting from initial admission to discharge from the same or another hospital. This may include a number of 'episodes' recorded back-to-back for the same patient. Each episode is initiated by a referral (including re-referral) or admission and is ended by a discharge.
Deprivation	The Scottish Index of Multiple Deprivation (SIMD) is used to calculate deprivation rates. SIMD has 38 indicators in 7 domains (income, employment, housing, health, education, skills and training, geographical access and crime), which have been combined into an overall index calculated for each datazone. Rates are reported by deciles with 1 being most deprived and 10 least deprived. Deciles divide the population into ten equal proportions so that 10% of the population falls into each quintile. SIMD 2009 has been applied for years 2007/08 to 2009/10 and SIMD 2012 has been applied from the year 2010/11 onwards.
EASR	European Age Standardised Rate; standardised rates are used to allow comparisons across geographical areas by controlling for differences in the age structure of local populations. Age standardised rates can be compared across areas and time periods. They give the number of events that would occur in a standard population (here per 100,000) if that population had the age-specific rates of a given area. The rates in this report are standardised to the European Standard population (ESP) as revised in 2013. This is different from previous publications, when the 1976 ESP was used. For more information see Appendix A1 – Note of Revisions.
ICD-10	International Classification of Diseases and Related Health Problems 10th revision is used to classify hospital admissions and deaths from 1996 onwards. Before this ISD used ICD-9.
Inpatient	This is when a patient occupies an available staffed bed in a hospital and either remains overnight whatever the original intention or is expected to remain overnight but is discharged earlier.
Provisional data	An indication that the data is provisional means that returns from hospitals are not yet complete and the final figure may be different to that reported at this moment in time.

List of Tables

Table No.	Name	Time period	File & size
	The file 2014-11-25-ARHS-FY2013-14-Tables.xls contains the following tables:		Excel [4,656KB]
S1	Numbers and EASRs for alcohol-related stays, patients and new patients – tables and charts by gender and age group (Scotland)	FY1981/82-2013/14	
S2	EASRs for alcohol-related stays, patients and new patients – table and chart at Scotland level	FY1981/82-2013/14	
S3	Number of stays per patient for alcohol-related diagnoses – tables and charts by age group, gender, NHS Board and council area	FY2013/14	
S4	EASRs and numbers for alcohol-related stays, patients and new patients - chart and tables by NHS Board	FY1981/82-2013/14	
S5	EASRs and numbers for alcohol-related stays, patients and new patients - chart and tables by council area	FY1981/82-2013/14	
S6	Numbers and EASRs for alcohol-related stays - tables by diagnosis, age group and gender (Scotland)	FY2013/14	
S7	Numbers and EASRs for alcohol-related stays and patients – chart and tables by diagnosis (Scotland)	FY1996/97-2013/14	
S8	Numbers and EASRs for alcohol-related stays, patients and new patients - chart and tables by age group for each diagnosis (Scotland)	FY1996/97-2013/14	
S9	Number of alcohol-related stays - by diagnosis; tables by NHS Board and Council area	FY2013/14	
S10	Numbers and EASRs for alcohol-related stays, patients and new patients - chart and tables, by gender and SIMD decile	FY2001/02-2013/14	
S11	Number and percentage of hospital stays resulting from emergency admissions, and emergency admissions by day of admission (tables and charts)	FY2013/14	

Contact

Annemarie van Heelsum
Principal Information Analyst
a.vanheelsum@nhs.net
0131 275 7099

Stephen Simmons
Information Analyst
stephen.simmons@nhs.net
0131 275 7572

Further Information

Further information can be found on the ISD website

Rate this publication

Please provide feedback on this publication to help us improve our services.

Appendix

A1 – Background Information

Hospital activity data are collected across the NHS in Scotland and are based on nationally available information routinely drawn from hospital administrative systems across the country. The principal data source for this publication is the SMR01 (acute inpatient and daycase) return.

SMR01 – Hospital general and acute inpatients and day cases

SMR01 is an episode based patient record relating to all inpatient and day cases discharged from specialities other than mental health, maternity, neonatal and geriatric long stay specialities in NHS Scotland. A record is generated for each inpatient and day case episode, of which there are about 1,200,000 each year. Attendances at Accident and Emergency that do not result in an admission are not included. Each individual patient may have more than one stay and hence the number of people discharged within a year will be less than the total number of stays. The SMR01 basic data set encompasses patient identification and demographic information, episode management information and general clinical information. Items such as waiting time for inpatient or day case admission and length of stay may be derived from the episode management information.

When figures are broken down by geographical area or age the numbers in some categories can be very small. In these cases both differences between categories and trends over time should be interpreted with caution because they may be misleading. The tables presented in this report are derived from the SMR01, and contain information about patients admitted to general hospitals (mainly for emergency treatment), where alcohol misuse is diagnosed as a factor in the patient's treatment. Up to six diagnoses are recorded per admission, and episodes with either a main or a supplementary diagnosis of alcohol misuse are included.

Alcohol misuse is recorded using the International Classification of Diseases. In 1996, ISD moved from using the 9th revision to the 10th revision of the ICD. The change introduced a number of new alcohol-related ICD codes. However, mapping of codes from ICD9 to ICD10 is not exact and so caution must be used when interpreting trends over the longer timeframes that are now shown in this report. The following codes were used in the analysis presented in this report:

ICD10 codes used for reporting alcohol-related discharges from Scottish hospitals

ICD10 code	Description
E24.4	Alcohol induced Pseudo-Cushing's syndrome
E51.2	Wernicke's Encephalopathy
F10	Mental & behavioural disorders due to use of alcohol
G31.2	Degeneration of nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
G72.1	Alcoholic myopathy
I42.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K85.2	Alcohol-induced acute pancreatitis *(code introduced 1/4/2013)*
K86.0	Alcohol-induced chronic pancreatitis
O35.4	Maternal care for (suspected) damage to foetus from alcohol

P04.3	Foetus and newborn affected by maternal use of alcohol
Q86.0	Fetal alcohol syndrome (dysmorphic)
R78.0	Finding of alcohol in blood
T51.0	Toxic effect of ethanol
T51.1	Toxic effect of methanol
T51.9	Toxic effect of alcohol, unspecified
X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol undetermined intent
Y57.3	Alcohol deterrents
Y90	Evidence of alcohol involvement determined by blood alcohol level
Y91	Evidence of alcohol involvement determined by level intoxication
Z50.2	Alcohol rehabilitation
Z71.4	Alcohol abuse counselling and surveillance
Z72.1	Alcohol Use

ICD9 codes used for reporting alcohol-related discharges from Scottish hospitals

ICD9 code	*Description*
2651	Other and unspecified manifestations of thiamine deficiency
3039	Alcohol dependence syndrome
3050	Nondependent abuse of drugs - *alcohol*
2918	Alcoholic Psychosis – *Other (alcohol withdrawal syndrome)*
2910	Alcoholic Psychosis – *Delerium Tremens*
2913	Alcoholic Psychosis – *other alcoholic dementia*
2915	Alcoholic Psychosis – *Alcoholic jealousy*
2919	Alcoholic Psychosis – *unspecified*
2911	Alcoholic Psychosis – *Korsakov's psychosis, alcoholic*
2912	Alcoholic Psychosis – *Other alcoholic dementia*
3575	Inflammatory and Toxic Neuropathy – *Alcoholic polyneuropathy*
4255	Cardiomyopathy - *Alcoholic Cardiomyopathy*
5353	Gastritis and duodenitis - *Alcoholic Gastritis*
5710	Chronic Liver disease and cirrhosis - *Alcoholic fatty liver*
5711	Chronic Liver disease and cirrhosis - *Acute alcoholic hepatitis*
5712	Chronic Liver disease and cirrhosis - *Alcoholic cirrhosis of liver* - *Laennec's cirrhosis*
5713	Chronic Liver disease and cirrhosis - *Alcoholic liver damage (unspecified)*
7607	Fetus or newborn affected by maternal conditions which maybe unrelated to present pregnancy – *Noxious influences transmitted via placenta or breast milk*
7598	Other and unspecified congenital anomalies – *Other specified anomalies*
7903	Non-specific findings on examination of blood – *Excessive blood level of alcohol*
9800	Toxic effect of ethyl alcohol – *Ethyl alcohol*
9801	Toxic effect of ethyl alcohol – *Methyl alcohol*
9809	Toxic effect of ethyl alcohol – *Unspecified*

External Alcohol codes

E8600	Accidental poisoning by alcohol not elsewhere classified -*Alcoholic beverages*
E8601	Accidental poisoning by alcohol not elsewhere classified - *Other and unspecified ethyl alcohol and its products*
E8602	Accidental poisoning by alcohol not elsewhere classified – *Methyl alcohol*
E8609	Accidental poisoning by alcohol not elsewhere classified - *Unspecified*

E9473   Other and unspecified drugs and medicaments - *Alcohol deterrents*

Codes that must appear with an external code

2550   Disorders of adrenal glands – *Pseudo Cushing's syndrome*
3594   Muscular dystrophies and other myopathies – *Toxic myopathy*
5709   Acute and subacute necrosis of liver
6554   Known or suspected fetal abnormality affecting management of mother –
              Suspected damage to fetus from other disease in the mother
3483   Other conditions of brain – *Encephalopathy, unspecified*
5771   Diseases of pancreas – *Chronic pancreatitis*

Paired codes

D3039 + A3317   Alcohol dependence syndrome + Cerebral degeneration in other
                  diseases classified elsewhere
D3039 + A3344   Alcohol dependence syndrome + Cerebral ataxia in diseases classified
                  elsewhere

Some caution is necessary when using these data as alcohol misuse may only be suspected and may not always be recorded by the hospital. The tables presented here are based on all alcohol-related diagnoses throughout the hospital stay.

Data Quality and Completeness

The ISD Data Quality Assurance (DQA) team is responsible for evaluating and ensuring SMR datasets are accurate, consistent and comparable across time and between sources. Details of the quality assurance process for SMRs are published on the DQA methodology webpage http://www.isdscotland.org/Products-and-Services/Data-Quality/Methodology/. Information on SMR data completeness can be found on the Hospital records Data webpage http://www.isdscotland.org/Products-and-Services/Hospital-Records-Data-Monitoring/SMR-Completeness/, while information on the timeliness of SMR data submissions can be found on the SMR Timeliness webpage http://www.isdscotland.org/Products-and-Services/Hospital-Records-Data-Monitoring/SMR-Timeliness/. There is a requirement for SMR01 data to be returned by hospitals within 6 weeks. After 7 months completeness is typically around 99%, but this year there has been a delay in records being submitted by NHS Highland because of a management system change in their hospitals. These hospitals have not submitted data since January 2014 and therefore NHS Highland data was only 76% complete when data was extracted for this report. This resulted in an estimated under-recording at national level of around 1%. The impact on the patient numbers reported is anticipated to be smaller than the impact on the number of stays.

Note of Revisions

The Health Improvement Alcohol & Drugs Team aims to continually improve the interpretation of the data and therefore analysis methods are reviewed and sometimes updated. The 2013/14 report has been expanded to include three major changes compared to the 2012/13 report:

- As well as adding the latest data (for 2013/14), the time trend has been much expanded from 5 years in the past to over 30 years (with figures going back to 1981/82) in this report. This does mean that the analysis now spans two versions of the ICD coding system (ICD-9 and ICD-10, with ICD-10 first being used in ISD in 1996). Mapping of codes from ICD9 to ICD10 is not exact, which needs to be kept in mind when interpreting time trends.

- The reporting on numbers of unique/individual patients having stayed in hospital each year has been expanded, with the same trends and demographic and geographical detail provided as previously just shown for hospital stays.

- Newly included is the number of "new" patients admitted to hospitals; defined as not having been hospitalised for an alcohol condition in the previous 10 years. This measure reflects incidence of hospitalisation rather than incidence in the epidemiological sense, because patients can be diagnosed with alcohol conditions in many other settings.

The purpose of providing these additional indicators is to give a fuller picture of health service use. Note also that the 2014 NHS Board boundaries are used throughout.

Revision of the European Standard Population

In the previous report in February 2014 major changes were made to the calculation of rates as a result of the introduction by Eurostat (the statistical institute of the European Union) of a new European standard population (ESP). The new ESP had a substantial impact on the rates reported in this publication.

Making comparisons between crude rates can be misleading if the age structures of the populations of the countries or regions are quite different. Areas with larger percentages of younger people are unlikely to have as high levels of death as areas with larger percentages of older people – and therefore if these differences are not adjusted for the wrong conclusion may be drawn about the health of an area simply because of the age-structure of the population. European Age Standardised Rates (EASRs) allows making comparisons between different geographical areas as they allow the effects of having different age structures in either the same population over time or different geographies to be removed. The European Standard Population (ESP) was first introduced in 1976, and was revised by Eurostat in 2013 to more closely reflect the current age structure in Europe. The new ESP (ESP2013) has been created based on an average of states' population projections for 2011 to 2030. Statistics providers across the UK have started to use ESP2013 from January 2014.
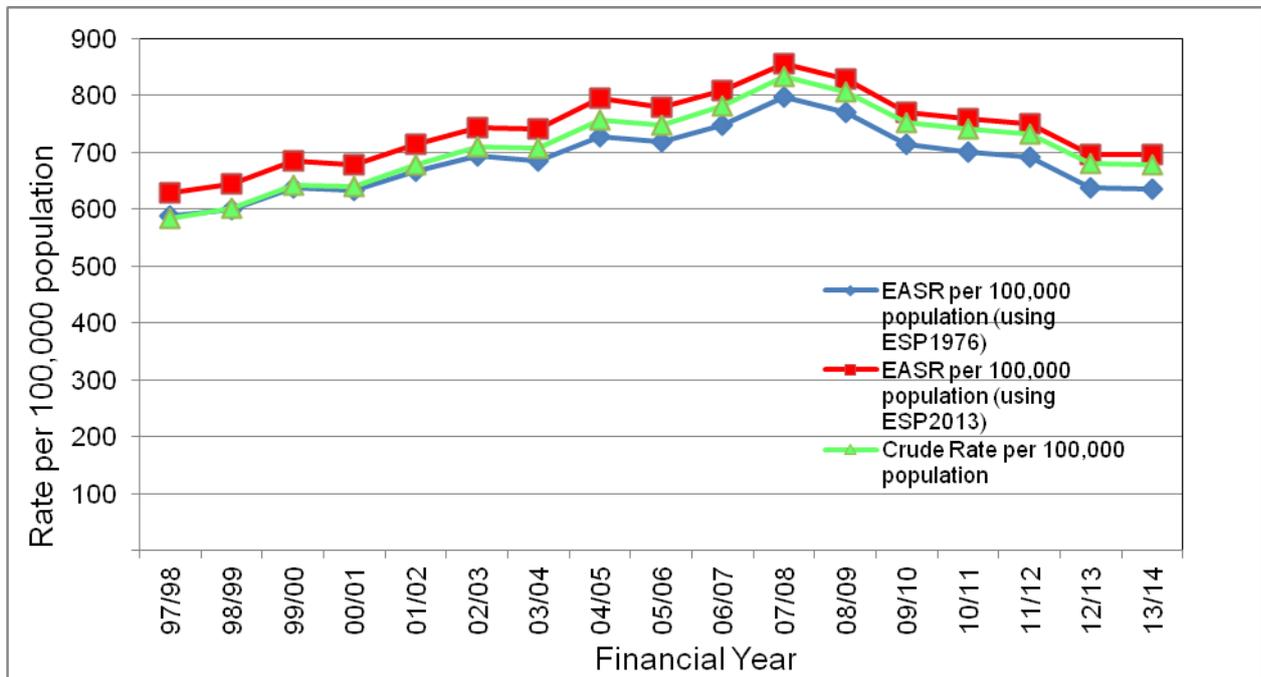
European Age Standardised Rates (EASRs) using ESP1976 cannot be compared with EASRs using ESP2013. The below chart (Figure A1) illustrates how the rates differ.

The chart shows three different methods to calculate a discharge rate per 100,000 population:

1. Crude rates; the total number of people discharged from hospital in a country or region, divided by the total population of that country or region, multiplied by 100,000.

2. Based on ESP 1976; for each 5 year age group, the crude rate is calculated and then the weighted average of all age groups is taken based on the weightings of the 1976 European Standard Population, to give the overall EASR.

3. Based on ESP 2013; as above, but based on the weightings of the 2013 European Standard Population, to give the overall EASR.

It can be seen that generally the EASR (using ESP1976) is the lowest of the three rates. The crude rate is slightly higher than this, and the EASR (using ESP2013) is a little higher still. Due to the number of alcohol-related discharges affecting the older age groups more than the younger age groups, the EASRs using ESP2013 will be higher than those using ESP1976.

Figure A1. General acute inpatient discharge rates per 100,000 population[1] with an alcohol-related diagnosis; by financial year (1997/98 to 2013/14); comparing (a) un-standardised (crude rates); (b) standardised rates using ESP1976[2,3]; and (c) standardised rates using ESP2013[4,5]

1. The population estimates used in the calculation of rates above are based on the 2011 Census results.
2. The European Standard Population (ESP), which was first used in 1976, was revised in 2013. European Age Standardised Rates (EASRs) using ESP1976 and ESP2013 are not comparable.
3. European Age-Sex Standardised Rate (EASR), calculated using ESP1976 and using 5 year age groups 0-4, 5-9 up to an upper age group of 85+.
4. European Age-Sex Standardised Rate (EASR), calculated using ESP2013 and using 5 year age groups 0-4, 5-9 up to an upper age group of 90+.
5. The upper age group for the 2013 European Standard Population structure is 95+. However, due to Scotland population estimates data being unavailable for the 95+ age group for all required geographies, the upper age group used is 90+. This is an amalgamated age group containing both the 90-94 and 95+ age groups.

The trends shown for each method of calculating rates are similar, giving confidence to trend analysis. EASRs based on ESP1976 are not comparable with EASRs based on ESP2013. Therefore, **rates from the 2012/13 and 2013/14 publications are not comparable with rates shown in previous ISD reports**. Note however that the actual number of people with an illness or who died does not change due to the European Standard Population revision.

More information regarding the ESP change can be obtained from the ISD website or the ONS website.

Further information

Further statistics on general acute hospital care are available at:
http://www.isdscotland.org/Health-Topics/Hospital-Care/.

Statistics on Emergency care are available at:
http://www.isdscotland.org/Health-Topics/Emergency-Care/Accident-and-Emergency-Data-Mart/

Statistics on Mental Health hospital inpatient care are available at:
http://www.isdscotland.org/Health-Topics/Mental-Health/Psychiatric-Hospital-Activity/.

Information on all ISD Scotland's national datamarts can be found on our website at:
http://www.isdscotland.org/Products-and-Services/Datamarts/ISD-Datamarts/.

If you would like further information on hospital discharges relating to drug misuse then
please contact the Health Improvement – Drug & Alcohol Team at
nss.isdsubstancemisuse@nhs.net.

For information about the completeness, timeliness and other data quality issues regarding
SMR01 data submissions contact the Data Management Team at nss.isdDMT@nhs.net.

Further information on alcohol-related hospital statistics in the United Kingdom is available
at the following URLs:

England:	Statistics on Alcohol - England, 2014
Wales:	Alcohol and Health in Wales 2014
Northern Ireland:	Alcohol information

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Alcohol-related Hospital Statistics Scotland 2013/14
Description	Data relating to hospital (SMR01) discharges with diagnosis of Alcohol misuse. These data are presented at a national level and also broken down by certain demographics. Information on the Mental Health Inpatient and Day Case Records (SMR04) that in the past was part of this publication is no longer included and will be published later in the Alcohol section on the ScotPHO website.
Theme	Health and Social Care
Topic	Substance Misuse
Format	PDF report with Excel tables
Data source(s)	ISD SMR01
Date that data are acquired	30 August 2014
Release date	Tuesday 25th November 2014
Frequency	Annual
Timeframe of data and timeliness	SMR01: 01/04/1981 to 31/03/2014 for Scotland overall and demographic data - stays & patients; 01/04/91 to 31/03/2014 for new patients. Limited long-term trend data for Specific diagnoses: 1996/97 to 31/03/2014, and Deprivation: 01/04/2001 to 31/03/2014.
Continuity of data	See Appendix A1 (Background information)
Revisions statement	These data are not subject to planned major revisions. However, the Health Improvement team aims to continually improve the interpretation of the data and therefore analysis methods may be updated in the future. In line with ISD standards agreed with NRS, the latest available population estimates and standard populations are used.
Revisions relevant to this publication	Two changes are made compared to the last publication: - Statistics are shown for a much longer time period (back to 1981/82 rather than just the last 5 years); - More extensive information on Patients (in addition to Stays) and new statistics on "new" patients (not stayed in hospital in the last 10 years). Note that no SMR04 figures are included in this report; these will be published separately on the ScotPHO website. All rates are age-sex standardised using the 2013 European standard population and the 2014 NHS Board boundaries are applied.
Concepts and definitions	See Hospital Care: Background Information http://www.isdscotland.org/Health-Topics/Hospital-Care/
Relevance and key uses of	Relevant to understanding Alcohol misuse in Scotland.

the statistics	Statistics will be used for policy making and service planning.
Accuracy	Quality checks are conducted by ISD. Figures are compared to previously published data and expected trends.
Completeness	Details of these data submissions issues are available on the Hospital Records Data Monitoring SMR Completeness web page
Comparability	The NHS Health and Social Care Information Centre (HSCIC) publishes figures on Hospital admissions in Statistics on Alcohol - England, 2014 but should not be directly compared with published data from Scotland. For more information see the Background information on the ISD Hospital Care website.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines.
Coherence and clarity	The report is available as a PDF file with tables clearly linked for ease of use.
Value type and unit of measurement	Rates are per 100,000 population, standardised for age and gender to the 2013 European Standard Population.
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	National Statistic
UK Statistics Authority Assessment	Completed assessment by UK Statistics Authority, report published 4th April 2012
Last published	25th February 2014; revisions published 2nd September 2014
Next published	27th October 2015
Date of first publication	1998
Help email	a.vanheelsum@nhs.net
Date form completed	4 November 2014

A3 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

Standard Pre-Release Access:

> Scottish Government Health Department
>
> NHS Board Chief Executives
>
> NHS Board Communication leads

Extended Pre-Release Access

Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

> Scottish Government Health Department (Analytical Services Division)

A4 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the ISD website.

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.