Drug-Related Hospital Statistics
Scotland 2016/17
Publication date – 26 September 2017
Introduction

This release from the Information Services Division reports on hospital stays in relation to a drug misuse diagnosis and the patients admitted to hospital for such treatment. This report describes the number of drug-related hospital stays, the number and characteristics of patients admitted to hospital, the substances involved and the geographical variations within Scotland. This includes information on inequalities and some of the health impacts of drug misuse.

Data used in this report

This report includes information on inpatients and day cases discharged by general acute and psychiatric specialties in Scotland, where drug misuse was mentioned in the records at some point during the patients' hospital stay. The information reported in this publication has been collated using data obtained from the following sources:

- General acute inpatient and day case records (SMR01), years 1996/97 to 2016/17; and,
- Psychiatric inpatient and day case records (SMR04), years 1996/97 to 2015/16.

Information is provided for the most recent available financial year (2016/17 for general acute stays, 2015/16 for psychiatric stays) and trends from 1996/97. A further section on combined general acute and psychiatric stays is also included in order to provide a more comprehensive description of hospital stays relating to drug misuse. Further background information is available in Appendix A1.

Using the electronic dashboard

Data accompanying this report is published in an electronic dashboard. This provides users with accessible, interactive content based on data from 1996/97 to 2016/17. As a result, it is not possible to provide specific table references as part of the commentary. Instead, commentary includes references to dashboard content using the following format:

- (Dataset>Domain>Indicator)

Where:

<table>
<thead>
<tr>
<th>Options within Dataset’</th>
<th>Options within ‘Domain’</th>
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<tbody>
<tr>
<td>General acute (SMR01)</td>
<td>Activity profile</td>
<td>NHS Board of residence</td>
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<tr>
<td>Psychiatric (SMR04)</td>
<td>Drug type – stays</td>
<td>ADP of residence</td>
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<td>Gen.acute/Psychiatric combined</td>
<td>Drug type – patients</td>
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<td>Drug type - hospital</td>
<td>Deprivation quintile</td>
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<td>Drugs by hospital type</td>
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For example, (General acute (SMR01)>Activity profile>Gender) means that the content relevant to the commentary can be found when:

1. the ‘General acute (SMR01)’ dataset is selected;
2. the ‘Activity profile’ domain is selected; and,
3. the ‘Gender’ indicator is selected.

The dashboard is organised by the dataset of interest (general acute stays, psychiatric stays and combined general acute and psychiatric stays) and includes seven themed domains, presenting analyses based on geographical, demographic and drug type indicators. All Indicators with each Domain contain Scotland figures. Therefore, when referring to Scotland data in this report, only the Dataset and Domain selection are specified (e.g. (General acute (SMR01)>Activity profile).

Once the relevant content has been selected, Scotland level information or information on specific Groups (e.g. ‘Male’ within the ‘Gender’ Domain) can be charted by clicking on the relevant row in the data table in the top left-hand corner of the dashboard.

Nearly all the data referred to in this report can be accessed using the dashboard. However, some statistics may require the associated data table to be exported. This can be done by clicking the ‘Export data’ button when the relevant Dataset, Domain and Indicator are selected.

The dashboard contains background and contextual information relevant to the publication. All notes relevant to the data can be found within the specific pages. For further information about the electronic dashboard, please see the User Guide.

Certain figures (commonly small numbers, for small areas or populations) are not shown. This is as a result of ‘Statistical Disclosure Control’ (SDC) which aims to prevent the release of information that can lead to the identification of individuals. Further information on the SDC methods applied by ISD Scotland is available from the ISD website.

**Terminology**

While attempts have been made to ensure the terminology used is as clear as possible, the statistical nature of this report means that the use of technical/statistical terms (e.g. opioids, stays, ‘New patients’) is unavoidable. For further explanation of these words or phrases, please refer to the Glossary.
Main points

- The rate of drug-related general acute stays increased steadily from 41 to 162 stays per 100,000 population between 1996/97 and 2016/17. After a lengthy period of stability, the rate of drug-related psychiatric stays increased from 29 to 36 stays per 100,000 population between 2014/15 and 2015/16.

- Stays among individuals aged 35 and over increased over the time series. For general acute stays among 45-49 year olds, there was a greater than eighteen-fold increase from 11 to 203 patients per 100,000 population between 1996/97 and 2016/17.

- In the most recent available year’s data, 61% of drug-related general acute stays were due to opioids (drugs similar to heroin) while 51% of drug-related psychiatric stays were associated with ‘multiple/other’ drugs.

- In the most recent available year’s data, approximately half of patients with general acute or psychiatric stays in relation to drug misuse lived in the 20% most deprived areas in Scotland.

- In 2015/16, 3,860 patients (72 new patients per 100,000 population) were treated in hospital (general acute/psychiatric combined) for drug misuse for the first time. The drug-related new patient rate has increased since 2006/07 (49 new patients per 100,000 population).
Results and Commentary

1. General acute

In 2016/17, there were 8,546 general acute stays with a diagnosis of drug misuse. These stays related to 6,535 patients and of these, 3,560 (54%) were ‘new’ patients (General acute (SMR01)>Activity profile).

Figure 1.1: Drug-related general acute hospital rates†‡
(Scotland; 1996/97 to 2016/17p)

Notes:
† Uses European Standard Population 2013 and National Records of Scotland 2016 mid-year population estimates.
‡ See Glossary for definitions of stays, patients and new patients. For new patient rates, the period from 1996/97 to 2005/06 is excluded due to diagnostic coding changes that affect the ten-year look back of SMR01 records required to calculate new patients. See endnote 2 for further details.
p Provisional.
Source: General acute inpatient/day case records (SMR01).
Stays

In 2016/17, the European Age-Sex Standardised Rate (EASR, hereafter referred to as ‘rate’) of general acute stays with a diagnosis of drug misuse was 162 stays per 100,000 population, the highest rate recorded across the time period presented. The drug-related general acute stay in 2016/17 (162) was four times the rate in 1996/97 (41 stays per 100,000 population). This rate increase has been fairly consistent, apart from a period of stability from 2003/04 to 2005/06 and a sharp decrease in 2012/13 (108 stays per 100,000 population). Since 2012/13, a consistent upward trend has been observed to 2016/17 (General acute (SMR01)>Activity profile and Figure 1.1).

Drug-related general acute stay rates varied by NHS Board (Figure 1.2). In 2016/17, the highest rates were seen in Ayrshire & Arran (333 stays per 100,000 population), Greater Glasgow & Clyde (238) and Fife (206). Among mainland NHS Boards, the lowest rate was observed in Borders (68) (General acute (SMR01)>Activity profile>NHS Board of residence).

Figure 1.2: Drug-related general acute stay† rates‡, by NHS Board of Residence (Scotland; 2016/17p)

Notes:
† See Glossary for definitions of stays, patients and new patients.
p Provisional.
Source: General acute inpatient/day case records (SMR01).

Drug type³

Opioid-related stay rates increased almost eightfold from 13 per 100,000 population in 1996/97 to 101 in 2016/17 (General acute (SMR01)>Activity profile>Drug type and Figure 1.3a). Apart from a notable decrease in 2012/13 (possibly as a consequence of the ‘heroin drought’ of 2010/11⁴), the increasing trend in opioid-related stays has been fairly consistent. Explanations for this increase are:
- A long-term rise in opioid-related hospital stays has occurred as individuals who have used opioids since the 1980s and 1990s experience greater ill-health from a range of conditions.

- Efforts to improve the accuracy of diagnosis coding resulted in a higher percentage of stays being attributed to opioids (increasing from 34% (791) in 1996/97 to 72% (4,425) in 2010/11) (General acute (SMR01)>Drug type – stays).

Since the early 2000s, opioid misuse has been associated with the majority of drug-related general acute stays. The increase in opioid stays was accompanied by a decrease in the rate and percentage of stays involving ‘multiple/other drugs’. The ‘multiple/other’ general acute stay rate decreased markedly from 2000/01 (33 stays per 100,000 population) to 2005/06 (16). The rate then remained fairly stable until 2011/12 (14), since when there has been an increase in the rate to 2016/17 (24) (General acute (SMR01)>Activity profile>Drug type).

There was a corresponding decrease in the percentage of stays involving ‘multiple/other drugs’ (from 45% (1,059) in 1996/97, to 12-15% since 2008/09 (General acute (SMR01)>Drug type – stays).

**Figure 1.3a: Drug-related general acute stay† rates‡, by drug type* (Scotland; 1996/97 to 2016/17p)**

![Graph showing drug-related general acute stay rates by drug type from 1996/97 to 2016/17](image)

**Notes:**
- † See Glossary for definitions of stays, patients and new patients.
- * For an explanation of the drug types referred to, see endnotes 6 and 7 and Glossary.
- p Provisional.

Source: General acute inpatient/day case records (SMR01).

Although numbers and rates of opioid-related stays have continued to increase, the percentage of stays attributed to opioids decreased from 2010/11 (4,425, 72%) to 2016/17 (5,250, 61%) (General acute (SMR01)>Drug type – stays).

In 2016/17, NHS Dumfries & Galloway (81%) and NHS Grampian (79%) had the highest percentage of general acute stays with an opioid-related diagnosis (General acute (SMR01)>Drug type – stays>NHS Board of residence).
Individual drug types were associated with fluctuations in stay rates over time (for example, the peak in cannabinoid stays in 2005/06, the increasing trend of cocaine stays to 2008/09). However, since the early 2010s, rates and percentage of stays associated with all illicit substances other than opioids or ‘multiple/other drugs’ have increased. Figure 1.3b excludes opioids and ‘multiple/other drugs’, focusing on the remaining illicit substances.

- Cannabinoid-related general acute stay rates doubled from 10 per 100,000 population in 2010/11 to 20 in 2016/17. The percentage of stays involving cannabinoids increased from 9% (538) to 13% (1,089) over the same period.

- Sedative/hypnotic-related general acute stay rates increased almost threefold from 5 per 100,000 population in 2010/11 to 14 in 2016/17. The percentage of stays involving sedatives/hypnotics increased from 4% (242) to 9% (739) over the same period.

- Cocaine-related general acute stay rates doubled from 6 per 100,000 population in 2010/11 to 13 in 2016/17. The percentage of stays involving cocaine increased from 5% (301) to 8% (704) over the same period.

- The rate of general acute stays involving ‘other stimulants’ increased markedly from 5 stays per 100,000 population in 2010/11 to 12 in 2014/15, before decreasing to 8 in 2016/17. In percentage terms, 4% (252) of general acute stays were related to ‘other stimulants’ in 2010/11, compared to 9% (641) of stays in 2014/15 and 5% (413) of stays in 2016/17. This increase and subsequent decrease may be associated with changes in the availability and use of ‘New’ or ‘Novel’ Psychoactive Substances.
**Type & length of stay**

In 2016/17, 94% (8,006) of drug-related general acute stays were as a result of an emergency admission rather than a planned (i.e. elective) admission. Individuals aged under 15 (98%), 15-19 (96%) and 20-24 years (97%) had the highest percentages of general acute stays following emergency admissions, while individuals aged 65 years or over had the lowest percentage of emergency admissions (86%) (General acute (SMR01)>Admission type>Age group).

General acute stays associated with sedatives/hypnotics (97%), multiple/other drugs (97%) and ‘other stimulants’ (97%) most often involved emergency admission. Stays associated with cannabinoids (90%) were least often admitted as an emergency (General acute (SMR01)>Admission type>Drug type).

The majority of drug-related general acute stays (7184, 84%) were for less than one week. Older patients were more likely to have longer stays. Forty five per cent of patients aged 65 or over stayed more than one week compared with no patients aged under 15 (General acute (SMR01)>Length of stay (LOS)>Age group). General acute stays related to opioids were most likely to be for one week or more (20%) (General acute (SMR01)>Length of stay (LOS)>Drug type).
Patients

In 2016/17, drug-related general acute patient rate was 124 patients per 100,000 population, the highest ever recorded. This was approaching four times the patient rate in 1996/97 (34 patients per 100,000 population), the pattern closely corresponding with changes in the stay rate. Generally, the local areas with the highest/lowest stay rates also had similarly high or low patient rates (General acute (SMR01)>Activity profile).

In 2016/17, the average number of general acute stays per patient was 1.31, a slight increase compared to 1996/97 (1.21) (General acute (SMR01)>Activity profile). Individuals aged 45-49 years had the highest average number of stays per patient (1.39) (General acute (SMR01)>Activity profile>Age group).

Sex

In 2016/17, 71% of patients who had a drug-related general acute stay were males (4,633, rate: 177 patients per 100,000 population) (females: 1,902, rate: 70 patients per 100,000 population). Between 1996/97 and 2016/17, the number and patient rate for males was consistently more than double that for females. Male and female patient rates both followed similar trends, each increasing more than threefold over the time series (General acute (SMR01)>Activity profile>Gender).

Deprivation

Patients from deprived areas were more likely to experience a drug-related general acute stay. In each year in the time series, over half of patients with a drug-related general acute stay have lived in the 20% most deprived areas in Scotland (Scottish Index of Multiple Deprivation (SIMD) quintile 1). In 2016/17, 54% of patients (3,555: 335 per 100,000 population) lived in SIMD quintile 1 (General acute (SMR01)>Activity profile>Deprivation quintile).

Figure 1.4: Drug-related general acute patient† rates‡, by deprivation* quintile (Scotland; 1996/97 to 2016/17§)

Notes:
† See Glossary for definitions of stays, patients and new patients.
* For an explanation of SIMD deprivation measures, see Glossary.
§ Provisional.
Source: General acute inpatient/day case records (SMR01).
Drug-related general acute patient rates increased for all SIMD quintiles from 1996/97 to 2016/17. The majority of patients lived in the most deprived areas (SIMD quintile 1), where drug-related patient rates increased from 91 to 335 patients per 100,000 population. However, the largest increase was observed in quintile 2 (from 34 to 147 patients per 100,000 population). The quintile 5 (least deprived) patient rate increased least over the time series (from 8 to 22 patients per 100,000 population) (General acute (SMR01)>Activity profile>Deprivation quintile and Figure 1.4).

**Age group**

The highest drug-related general acute patient rate in 2016/17 was observed among individuals aged 35-39 years (351 patients per 100,000 population). There was fluctuation over the time series, but comparing 1996/97 to 2016/17, drug-related general acute patient rates increased only slightly among individuals aged 15-19 and 25-29 years and a small decrease was observed among individuals aged 20-24 years. Over the same period, patient rates among all age groups from 30-34 to 60-64 years increased markedly. The following age groups had the largest increases (General acute (SMR01)>Activity profile>Age group and Figure 1.5a):

- 20 to 333 patients per 100,000 population for 40-44 year olds;
- 11 to 203 patients per 100,000 population for 45-49 year olds; and,
- 7 to 125 patients per 100,000 population for 50-54 year olds.

![Figure 1.5a: Drug-related general acute patient rates, by 5-year age group (Scotland; 1996/97 to 2016/17)](image)

Notes:

† See Glossary for definitions of stays, patients and new patients.
p Provisional.
Source: General acute inpatient/day case records (SMR01).

A recent Scottish Drugs Forum report on the ageing cohort of drug users in Scotland explored the demographics and health and social care needs of long-term drug users aged 35 and over,
describing their experiences of marginalisation, poor health outcomes and high mortality. By grouping patients into two age categories (under 35 years and 35 years and over), it is possible to discern age-related patient rate changes for this group more clearly. Drug-related general acute patient rates among the under 35s increased at the beginning of the time series and have fluctuated between approximately 100 to 125 patients per 100,000 population since 1998/99 (2016/17: 111 patients per 100,000 population). Rates among individuals aged 35 and over have increased consistently throughout the time series, from 11 in 1996/97 to 132 in 2016/17 (a 12 fold increase) (Figure 1.5b (data not available on dashboard)).

![Figure 1.5b: Drug-related general acute patient rates, by age group (Scotland; 1996/97 to 2016/17)](image)

**Notes:**

† See [Glossary](#) for definitions of stays, patients and new patients.
p Provisional.

Source: General acute inpatient/day case records (SMR01).

In 2016/17, 59% (3,857) of all general acute patients treated for drug misuse had a stay in relation to opioids and 16% (1,069) had a stay in relation to ‘multiple/other’ drugs. General acute stays associated with opioids were observed in 74% (843) of patients aged 35-39 and accounted for the highest percentage of stays among patients in all except the three youngest age groups ([General acute (SMR01)>Drug type – patients>Age group]). The drugs associated with the highest percentage of stays among patients in the three youngest age groups were:

- Among under 15s, 49% of patients had a stay in relation to cannabinoids, followed by ‘other stimulants’ (40%).
- Among 15-19 year olds, 33% of patients had a stay in relation to ‘other stimulants’, followed by cannabinoids (30%).
- Among 20-24 year olds, 30% of patients had a stay in relation to cocaine, followed by cannabinoids (26%) and opioids and ‘multiple/other drugs’ (both 19%).
New patients

Patients were classed as ‘new’ patients if they did not have a similar stay in hospital within the previous ten years\(^2\). In 2016/17, the new patient rate for drug-related general acute stays was 66 new patients per 100,000 population. The drug-related general acute new patient rate has increased since 2006/07 (43 new patients per 100,000 population). However, much of this rate increase has occurred since 2012/13 (45) (General acute (SMR01)>Activity profile).

The increase in the new patient rate from 2006/07 to 2016/17 was less than the increase in the patient rate over the same period. Therefore, while in 2006/07, 60% of general acute patients were ‘new’, this percentage had decreased to 54% in 2016/17 (General acute (SMR01)>Activity profile).

By NHS Board area, new patient rates were highest in Ayrshire & Arran (106 new patients per 100,000 population), Greater Glasgow & Clyde (100) and Lanarkshire (75), while the lowest rate among the mainland areas was observed in Grampian (36) (General acute (SMR01)>Activity profile>NHS Board of residence).

Sex

In 2016/17, 73% of new patients experiencing a general acute stay in relation to drug misuse were males (2,595, rate: 98 new patients per 100,000 population) (females: 965, rate: 35) (General acute (SMR01)>Activity profile>Gender).

Age group

The highest drug-related new patient rate was observed among individuals aged 35-39 years (157 new patients per 100,000 population). The largest increases in new patient rates were observed among individuals aged 50-59 years (General acute (SMR01)>Activity profile>Age Group):

- 55-59 years (fivefold increase from 7 per 100,000 in 2006/07 to 36 per 100,000 in 2016/17); and,
- 50-54 years (almost fivefold increase from 13 per 100,000 in 2006/07 to 65 per 100,000 in 2016/17).

Drug type\(^3\)

Opioids were associated with the highest drug-related new patient rate (29 per 100,000 population (or 43% of new patients) in 2016/17), followed by cannabinoids (14 (21% of new patients)) and ‘multiple/other’ drugs (10 (15% of new patients)). The rate of new cannabinoid patients more than doubled from 6 per 100,000 population (14% of new patients) in 2006/07 to 14 in 2016/17 (General acute (SMR01)>Activity profile>Drug type).

The opioid patient group was the largest overall, but contained the lowest percentage of ‘new’ patients. In 2016/17, of all the general acute opioid patients (3,857), 40% (1,531) were new patients (General acute>Activity profile>Drug type). The drug types which had the highest percentage of ‘new’ patients compared to all patients were:

- Other stimulants (82%: 319 new patients/390 patients);
- Cannabinoids (77%: 759 new patients/983 patients); and,
- Cocaine (74%: 479 new patients/648 patients).
2. Psychiatric

It should be noted that discussion of drug-related psychiatric hospital trends is based on the period from 1997/98 to 2015/16. As SMR04 stays are typically longer than SMR01 stays, psychiatric episode data are submitted in two parts and compiled and quality assured over a longer time period (see Appendix A1). Therefore:

- The change in diagnosis coding from ICD9 to ICD10 at the start of 1996/97 had an impact on the psychiatric figures for the rest of that year. Although 1996/97 data are included in the electronic dashboard, the commentary in this section is based on the period from 1997/98 onwards, when SMR04 data appear to be more consistent.

- The most recent data available for analysis is for 2015/16.

In 2015/16, there were 1,919 psychiatric stays with a diagnosis of drug misuse. These stays related to 1,609 patients and of these, 1,082 (67%) were ‘new’ patients (Psychiatric (SMR04)>Activity profile).

![Figure 2.1: Drug-related psychiatric hospital rates†‡ (Scotland; 1996/97 to 2015/16p)](image)

Notes:
† Uses European Standard Population 2013 and National Records of Scotland 2016 mid-year population estimates.
‡ See Glossary for definitions of stays, patients and new patients. For new patient rates, the period from 1996/97 to 2005/06 is excluded due to diagnostic coding changes that affect the ten-year look back of SMR04 records required to calculate new patients. See endnote 2 for further details.
p Provisional.
Source: Mental health inpatient/day case records (SMR04).
Stays

In 2015/16, the rate of psychiatric stays with a diagnosis of drug misuse was 36 stays per 100,000 population. Rates fluctuated over the time series, with two periods of relative stability from 1997/98 to 2005/06 and from 2005/06 to 2014/15. There was a large increase between 2014/15 (29 stays per 100,000 population) and 2015/16 (36), when the highest rate in the time series was recorded (Psychiatric (SMR04)>Activity profile and Figure 2.1).

Figure 2.2 illustrates the variance of drug-related psychiatric stay rates by NHS Board. In 2015/16, the highest rates were seen in Forth Valley (58 stays per 100,000 population), Ayrshire & Arran (52) and Lothian (48). Among mainland NHS Boards, the lowest rate was observed in Grampian (14) (Psychiatric (SMR04)>Activity profile>NHS Board of residence).

Figure 2.2: Drug-related psychiatric stay† rates‡, by NHS Board of Residence (Scotland; 2015/16⁹)

![Graph showing drug-related psychiatric stay rates by NHS Board]

Notes:
† See Glossary for definitions of stays, patients and new patients.
⁹ Provisional.
Source: Mental health inpatient/day case records (SMR04).

Drug type⁹

In 2015/16, the rate of psychiatric stays associated with ‘multiple/other’⁸ drugs was 18 per 100,000 population (Figure 2.3a). The large rate increases observed in 2014/15 and 2015/16 followed a lengthy period of decreasing rates since the previous high in 2002/03 (19). Unlike in general acute stays, where improvements in diagnosis coding led to a decrease in ‘multiple/other’ recording, this category continues to be associated with the majority of drug-related psychiatric stays⁸ (Psychiatric (SMR04)>Activity profile>Drug type).
Throughout the time series, ‘multiple/other’ drugs have been reported in approximately 50% to 60% of drug-related psychiatric stays (2015/16: 977, 51%) (Psychiatric (SMR04)>Drug type - stays).

In 2015/16, the rate of psychiatric stays associated with opioids was 13 per 100,000 population (the highest rate observed across the time series). The rate of opioid-related psychiatric stays fell from 10 per 100,000 population in 2001/02 to 6 per 100,000 population in 2007/08, before a consistent increase to 2015/16 (Psychiatric (SMR04)>Activity profile>Drug type).

Around one third of psychiatric stays (653, 34%) were associated with opioids, a large increase since 1997/98 (405, 26%). NHS Borders (50%) had the highest percentage of psychiatric stays with an opioid-related diagnosis (Psychiatric (SMR04)>Drug type - stays>NHS Board of residence).

Figure 2.3a: Drug-related psychiatric stay† rates‡, by drug type* (Scotland; 1996/97 to 2015/16⁰)

Notes:
† See Glossary for definitions of stays, patients and new patients.
* For an explanation of the drug types referred to, see endnotes 6 and 7 and Glossary.
⁰ Provisional.

Source: Mental health inpatient/day case records (SMR04).

Figure 2.3b excludes opioids and ‘multiple/other drugs’, focusing on rate changes for the remaining illicit substances. The rate of cannabinoid-related psychiatric stays was the highest yet recorded (5 stays per 100,000 population). The highest rate previously recorded was 4 per 100,000 population in 2005/06. This was followed by a 9-year period in which rates were consistently around 2 per 100,000 population (Psychiatric (SMR04)>Activity profile>Drug type).

Cannabinoids were associated with 14% (271) of drug-related psychiatric stays in 2015/16 compared to 9% (130) in 2014/15 (Psychiatric (SMR04)>Drug type - stays). The large rate and percentage increases observed in 2015/16 may be associated with the use of synthetic cannabinoids.
Figure 2.3b: Drug-related psychiatric stay† rates‡, by selected drug type* (Scotland; 1996/97 to 2015/16p)

Notes:
† See Glossary for definitions of stays, patients and new patients.
* Excludes opioids and ‘multiple/other’ drugs. For an explanation of the drug types referred to, see endnotes 6 and 7 and Glossary.
p Provisional.
Source: Mental health inpatient/day case records (SMR04).

The rate of sedative/hypnotic-related psychiatric stays was also the highest recorded in the time period (3 per 100,000 population) (Psychiatric (SMR04)>Activity profile>Drug type).

Sedatives/hypnotics were associated with 9% (171) of drug-related psychiatric stays in 2015/16 (Psychiatric (SMR04)>Drug type - stays).

Type & length of stay
In 2015/16, two thirds (1,288, 67%) of drug-related psychiatric stays were as a result of an emergency related admission rather than a planned (i.e. elective) admission. Psychiatric stays relating to individuals aged 15-19 had the highest percentage of emergency admissions (79%), while stays among 65 year olds and older were least likely to have been an emergency admission (39%) (Psychiatric (SMR04)>Admission type>Age group).

The drugs most likely to be involved in emergency psychiatric admissions were ‘multiple/other’ drugs (77%), followed by cannabinoids (73%). Only 43% of cocaine related stays were emergency admissions (Psychiatric (SMR04)>Admission type>Drug type).

In contrast to general acute stays, the majority of drug-related psychiatric stays (1,282, 67%) were for more than one week. Older patients were more likely to have longer stays: 92% of patients aged 65 and over stayed more than one week compared with 58% of patients aged 20-24 (Psychiatric (SMR04)>Length of stay (LOS)>Age group).

Psychiatric stays related to sedatives/hypnotics (73%) and opioids (71%) were most likely to be for one week or more (Psychiatric (SMR04)>Length of stay (LOS)>Drug type).
Patients

In 2015/16, the drug-related psychiatric patient rate was 30 patients per 100,000 population, the highest yet recorded. Fluctuations in the drug-related psychiatric patient rate corresponded with changes in the stay rate, increasing sharply since 2014/15 (25 patients per 100,000 population) (Psychiatric (SMR04)>Activity profile). In 2015/16, NHS Forth Valley had the highest drug-related psychiatric patient rate (45 patients per 100,000 population) (Psychiatric (SMR04)>Activity profile>NHS Board of residence).

In 2015/16, the average number of psychiatric stays per patient was 1.19, approximately the same as in 1997/98 (1.23) (Psychiatric (SMR04)>Activity profile). Individuals aged 40-44 years had the highest number of psychiatric stays per patient (1.26) (Psychiatric (SMR04)>Activity profile>Age group).

Sex

In 2015/16, 70% of patients who had a psychiatric stay related to drug misuse were males (1,125, rate: 43 patients per 100,000 population) (females: 484, rate: 18 patients per 100,000 population). The numbers and rates of males were approximately double that of females throughout the time series (Psychiatric (SMR04)>Activity profile>Gender).

Deprivation

Patients from more deprived areas were more likely to experience a psychiatric stay related to drug misuse. Throughout the time series from 1997/98 (50%) to 2015/16 (769, 48%), approximately half of patients with a psychiatric stay in relation to drug misuse lived in the 20% most deprived areas in Scotland (Scottish Index of Multiple Deprivation (SIMD) quintile 1; 72 patients per 100,000 population) (Psychiatric (SMR04)>Activity profile>Deprivation quintile and Figure 2.4).

Figure 2.4: Drug-related psychiatric patient† rates‡, by deprivation* quintile (Scotland; 1996/97 to 2015/16³)

Notes:
† See Glossary for definitions of stays, patients and new patients.
* For an explanation of SIMD deprivation measures, see Glossary.
³ Provisional.

Source: Mental health inpatient/day case records (SMR04).
For each deprivation (SIMD) quintile, drug-related psychiatric patient rates reached their highest recorded level in 2015/16. Most deprivation quintiles have shown a consistent upward trend since 2013/14. The largest rate increase between 2013/14 and 2015/16 was observed in quintile 2 (from 28 to 39 patients per 100,000 population) and the lowest in the two least deprived quintiles (SIMD 4 and 5) (from 10 to 12 and 5 to 7 patients per 100,000 population respectively) (Psychiatric (SMR04)>Activity profile>Deprivation quintile and Figure 2.4).

**Age group**

The highest drug-related psychiatric patient rate was observed among those aged 35-39 years (90 patients per 100,000 population) (Psychiatric (SMR04)>Activity profile>Age group and Figure 2.5).

Drug-related psychiatric patient rates for almost all age groups increased from 2014/15 to 2015/16. However, over a longer time series (from 1997/98 to 2015/16) rates decreased among younger age groups:

- 52 to 24 patients per 100,000 population for 15-19 year olds;
- 89 to 38 patients per 100,000 population for 20-24 year olds; and,
- 86 to 53 patients per 100,000 population for 25-29 year olds.

Over the same period, drug-related psychiatric patient rates increased for older individuals, more than doubling between 1997/98 and 2015/16 for the following age groups:

- 34 to 90 patients per 100,000 population for 35-39 year olds;
- 19 to 79 patients per 100,000 population for 40-44 year olds; and,
- 12 to 49 patients per 100,000 population for 45-49 year olds.

Figure 2.5a: Drug-related psychiatric patient† rates‡, by 5-year age group (Scotland; 1996/97 to 2015/16³)

Notes:
† See Glossary for definitions of stays, patients and new patients.
³ Provisional.
Source: Mental health inpatient/day case records (SMR04).
By grouping patients into two age categories (under 35 years and 35 years and over) as per the recent Scottish Drugs Forum report on older people with a drug problem, it is possible to discern age-related patient rate changes for these groups more clearly (Figure 2.5b (data not available in dashboard)). Drug-related psychiatric patient rates among the under 35s decreased by approximately half between 1999/2000 (50 per 100,000 population) and 2014/15 (24) before increasing sharply in 2015/16 (30). Patient rates among individuals aged 35 and over have increased approximately threefold between 1997/98 (10 stays per 100,000 population) and 2015/16 (31).

![Figure 2.5b: Drug-related psychiatric patient rates, by age group (Scotland; 1996/97 to 2016/17)](image)

Notes:
† See Glossary for definitions of stays, patients and new patients.
p Provisional.
Source: Mental health inpatient/day case records (SMR04).

In 2015/16, half (809, 50%) of all drug-related psychiatric patients had a stay in relation to ‘multiple/other’ drugs and 36% (579) had a stay in relation to opioids. Opioid-related stays were as prevalent as stays relating to multiple/other drugs among 50-54 years olds (41% for both drug types) and 55-59 year olds (42% for both drug types) (Psychiatric (SMR04)>Drug type – patients>Age group).

In 2015/16, 15% (245) of drug-related psychiatric patients had a stay in relation to cannabinoids. The highest percentages of patients with cannabinoid related stays were observed among individuals aged 15-19 years (28%, 21) and 20-24 years (27%, 37) (Psychiatric (SMR04)>Drug type – patients>Age group).
New patients

Patients were classed as ‘new’ patients if they did not have a similar stay in hospital within the previous ten years. The 2015/16 rate for new patients with a drug-related psychiatric stay was 20 new patients per 100,000 population. The drug-related psychiatric new patient rate increased gradually from 2006/07 (12 new patients per 100,000 population) to 2014/15 (16), before a larger increase in 2015/16 (Psychiatric (SMR04)>Activity profile).

The increase in the new patient rate from 2006/07 to 2015/16 was of a larger magnitude than the percentage increase in the patient rate over the same period. Therefore, while in 2006/07, 56% of patients with a psychiatric drug-related stay were ‘new’, this percentage had increased to 67% in 2015/16 (Psychiatric (SMR04)>Activity profile).

In 2015/16, NHS Forth Valley had the highest drug-related psychiatric new patient rate (32 new patients per 100,000 population), while the lowest rate among the mainland boards was recorded in Grampian (9) (Psychiatric (SMR04)>Activity profile>NHS Board of residence).

Sex

In 2015/16, 71% of new patients experiencing a psychiatric stay in relation to drug misuse were males (763, rate: 29 new patients per 100,000 population) (females: 319, rate: 12 new patients per 100,000 population) (Psychiatric (SMR04)>Activity profile>Gender).

Age group

The highest drug-related new patient rate was observed among those aged 35-39 years (58 new patients per 100,000 population). The rate of new patients aged 15-19 years doubled from 2014/15 (11 new patients per 100,000 population) to 2015/16 (22 new patients per 100,000 population) (Psychiatric (SMR04)>Activity profile>Age group).

Drug type

‘Multiple/other’ drugs were associated with the highest drug-related new patient rate (10 per 100,000 population (or 48% of new patients) in 2015/16), followed by opioids (7 per 100,000 population (31% of new patients)) and cannabinoids (3 per 100,000 population (16% of new patients)) (Psychiatric (SMR04)>Activity profile>Drug type).

While they accounted for a minority of drug-related psychiatric new patients overall, the cannabinoid (71%: 174 new patients/245 patients) and ‘other stimulants’ (70%: 43 new patients/61 patients) patient groups included the highest proportions of ‘new’ patients compared to all patients (Psychiatric (SMR04)>Activity profile>Drug type).
3. General acute/Psychiatric combined

It should be noted that discussion of general acute and/or psychiatric (also referred to as general acute/psychiatric combined) hospital trends is based on the period from 1997/98 (see Section 2) to 2015/16 (the most recent year for which both datasets are available).

In 2015/16, there were 9,556 general acute/psychiatric combined stays with a diagnosis of drug misuse. These stays related to 7,310 patients and, of these, 3,860 (53%) were ‘new’ patients (Gen.acute/Psychiatric combined—Activity profile).

Drug-related general acute stays outnumbered comparable psychiatric stays, with 80% (7,637/9,556) of total 2015/16 stays in general acute hospitals. Combined analysis furthers our understanding of drug related hospital information by:

- quantifying overall numbers of stays and patients in each financial year; and,
- providing (in the combined new patient rate) an indication of the overall incidence of problem drug use resulting in hospital admission.

**Figure 3.1: Drug-related general acute/psychiatric combined hospital rates†‡ (Scotland; 1996/97 to 2015/16p)

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Notes:
† Uses European Standard Population 2013 and National Records of Scotland 2016 mid-year population estimates.
‡ See Glossary for definitions of stays, patients and new patients. For new patient rates, the period from 1996/97 to 2005/06 is excluded due to diagnostic coding changes that affect the ten-year look back of SMR01 and SMR04 records required to calculate new patients. See endnote 2 for further details.
P Provisional.
Source: General acute inpatient/day case records (SMR01) and mental health inpatient/day case records (SMR04) combined.
Stays

The drug-related general acute-psychiatric combined stay rate increased steadily over the time series, more than doubling over the period 1997/98 (77 stays per 100,000 population) to 2015/16 (181) (Gen.acute/Psychiatric combined>Activity profile and Figure 3.1).

The average number of general acute and/or psychiatric stays per patient changed little between 1997/98 (1.29) and 2015/16 (1.31) (Gen.acute/Psychiatric combined>Activity profile).

Drug type

In 2015/16, the rate of opioid-related general acute-psychiatric stays was 104 per 100,000 population, almost four times the rate of 27 per 100,000 population in 1997/98 (Gen.acute/Psychiatric combined>Activity profile>Drug type and Figure 3.2).

The percentage of combined general acute-psychiatric drug-related stays attributed to opioids increased from 35% (1,524) in 1997/98 to 64% (4,982) in 2011/12, since when the percentage decreased to 56% (5,380) in 2016/17 (Gen.acute/Psychiatric combined>Drug type - stays).

Figure 3.2: Drug-related general acute/psychiatric combined stay† rates‡, by drug type* (Scotland; 1996/97 to 2015/16p)

Notes:
† See Glossary for definitions of stays, patients and new patients.
* For an explanation of the drug types referred to, see endnotes 6 and 7 and Glossary.
p Provisional.
Source: General acute inpatient/day case records (SMR01) and mental health inpatient/day case records (SMR04) combined.

Decreases in the rate of general acute stays attributed to ‘multiple/other’6 drugs were reflected in the combined general acute/psychiatric stay rate, with a decrease from 2002/03 (50) to 2005/06 (32) and an increase from 2012/13 (29) to 2015/16 (39) (Gen.acute/Psychiatric combined>Activity profile>Drug type).
For ‘multiple/other’ drugs, the number of stays remained approximately the same over the time series, while the percentage more than halved from 1997/98 (48%, 2,072) to 2015/16 (22%, 2,058) (Gen.acute/Psychiatric combined>Drug type - stays).

From 1997/98 to 2015/16, the rate of cannabinoid-related general acute and/or psychiatric stays increased more than fivefold from 4 to 22 per 100,000 population. The 2015/16 cannabinoid stay rate was the highest recorded, higher than the 2005/06 rate (15 per 100,000 population) which occurred during a period when cannabis had been downgraded from a Class B to a Class C substance in the schedule of controlled drugs listed in the Misuse of Drugs Act 1971 (Gen.acute/Psychiatric combined>Activity profile>Drug type).

The percentage of combined general acute/psychiatric drug-related stays attributed to cannabinoids increased from 5% (228) in 1997/98 to 13% (1,193) in 2015/16 (Gen.acute/Psychiatric combined>Drug type - stays).
Patients

The drug-related general acute/psychiatric combined patient rate has increased since 1997/98, the pattern closely corresponding with changes in the stay rate. The combined patient rate doubled over the period 1997/98 (60 patients per 100,000 population) to 2015/16 (138) (Gen.acute/Psychiatric combined>Activity profile).

Age group

Figure 3.3 shows the trend towards an ageing drug-related patient profile over the past five years (comparing 2011/12 and 2015/16). For both sexes, drug-related general acute/psychiatric combined patient rates increased in the 15-19, 20-24 year age groups and among all groups aged 35-39 years and older, while rates among individuals aged 25-29 and 30-34 (males only) decreased (data not shown on dashboard).

Figure 3.3: Drug-related general acute/psychiatric combined patient† rates‡, by sex and age group (Scotland; 2011/12 & 2015/16p comparison)

Notes:
† See Glossary for definitions of stays, patients and new patients.
p Provisional.
Source: General acute inpatient/day case records (SMR01) and mental health inpatient/day case records (SMR04) combined.

Ageing cohort of opioid users

Figure 3.4 (data not shown on dashboard) shows that, over time, successive age groups have had the highest opioid-related patient rates:

- individuals aged 20-24 in 1998/99;
- individuals aged 25-29 years from 1999/00 to 2006/07;
• individuals aged 30-34 years from 2007/08 to 2011/12; and,
• individuals aged 35-39 years from 2012/13 to 2015/16.

The increase in patient rates among individuals aged 40-44 suggests this age group will be the next group with the highest opioid-related patient rates. These trends are strongly suggestive of an ageing cohort of problem opioid users\(^3\) and show that increased patient rates among 15-19 and 20-24 year olds (Figure 3.3) do not appear to be associated with opioid use.

**Figure 3.4: Opioid\(^\dagger\)-related general acute/psychiatric combined patient\(^\ddagger\) rates\(^*\), by age group (Scotland: 1996/97 to 2015/16\(^p\))**

![Graph showing opioid-related patient rates by age group from 1996/97 to 2015/16.](image)

**Notes:**
\(\dagger\) For an explanation of opioids, see Glossary.
\(\ddagger\) See Glossary for definitions of stays, patients and new patients.
\(p\) Provisional.
Source: General acute inpatient/day case records (SMR01) and mental health inpatient/day case records (SMR04) combined.

**Changing profile of cannabinoid users**

Figure 3.5 (data not shown on dashboard) shows changing patterns of cannabinoid-related patient rates by age group. From the start of the time series to around 2010/11, despite inter-year variation, cannabinoid patient rates were generally highest in the younger age groups (15-19, 20-24 and 25-29) and lowest in the oldest age groups. From 2010/11 onwards, while cannabinoid patient rates continued to be higher among younger age groups, rates among the 40-44, 45-49 and 50-54 age groups increased markedly. Increases in patient rates were observed across the majority of age groups in 2015/16. These trends may be indicative of the increasing use of synthetic cannabinoids among all age groups and particularly among older drug users.
**Figure 3.5: Cannabinoid†-related general acute/psychiatric combined patient‡ rates*, by age group (Scotland; 1996/97 to 2015/16)**

![Graph showing Cannabinoid-related general acute/psychiatric combined patient rates by age group over time.](image)

**Notes:**
† For an explanation of cannabinoids, see [Glossary](#).
‡ See [Glossary](#) for definitions of stays, patients and new patients.

**Drug and Hospital Type**

Among all patients with a drug-related stay in 2015/16, 78% were treated in a general acute hospital only, 18% within a psychiatric hospital only and 4% in both general acute and psychiatric hospitals. While the majority of stays associated with every drug type occurred in general acute hospital, patients experiencing health issues associated with ‘multiple/other’ drug use were most likely to have stayed in a psychiatric hospital in 2015/16 (48% (including patients who stayed in both types of hospital)), followed by those using sedatives/hypnotics (30%) and cannabinoids (25%). Patients using cocaine (10%) were least likely to have stayed in a psychiatric hospital in 2015/16 ([Gen.acute/Psychiatric combined>Drug type – hospital>Drugs by hospital type](#)).
New patients

Patients were classed as ‘new’ patients if they did not have a similar stay in hospital within the previous 10 years. In 2015/16, 3,860 patients (72 new patients per 100,000 population) were treated in hospital for drug misuse for the first time. The drug-related general acute/psychiatric combined new patient rate varied little from 2006/07 (49 new patients per 100,000 population) to 2012/13 (52), but has increased markedly since (2015/16 (72)) (Gen.acute/Psychiatric combined>Activity profile).

Age group

Figure 3.6 shows the trend towards an ageing drug-related new patient profile over the past five years (comparing 2011/12 and 2015/16). Similar to all patients (Figure 3.3), the drug-related general acute/psychiatric combined new patient rates for both sexes in the 15-19, 20-24 year age groups and among age groups from 35-39 years and older increased, while rates for those aged 25-29 (females only) and 30-34 (males only) were lower (data not shown on dashboard).

Figure 3.6: Drug-related general acute/psychiatric combined new patient† rates‡, by sex and age group (Scotland; 2011/12 & 2015/16³ comparison)

Notes:

† See Glossary for definitions of stays, patients and new patients. For new patient rates, the period from 1996/97 to 2005/06 is excluded due to diagnostic coding changes that affect the ten-year look back of SMR01 and SMR04 records required to calculate new patients. See endnote 2 for further details.


³ Provisional.

Source: General acute inpatient/day case records (SMR01) and mental health inpatient/day case records (SMR04) combined.

Drug type

The opioid patient group was the largest overall, but contained the lowest percentage of ‘new’ patients. In 2015/16, of all general acute/psychiatric combined opioid patients (4,027), 36% (1,468) were new patients (Gen.acute/Psychiatric combined>Activity profile>Drug type). The drug types with the highest percentage of new patients in 2015/16 were:
Cocaine (74%: 411 new patients/558 patients)

‘Other stimulants’ (74%: 422 new patients/574 patients); and,

Cannabinoids (73%: 787 new patients/1,080 patients).

Although opioid patients have the lowest percentage of new patients to all patients, they continue to account for the highest percentage of ‘new’ drug-related hospital patients (38%), followed by ‘multiple/other’ drugs (22%) and cannabinoids (20%).

The opioid patient group is large and ageing and, compared to other patient groups, most individuals have previously been admitted to hospital in connection with their drug use. However, for ‘other stimulants’, cannabinoids and cocaine, increasing numbers of ‘new’ patients appear to be closely associated with increasing stay and patient rates. These patient groups may include a high percentage of ‘new’ patients because the relevant substances are most commonly used by young people (who are least likely to have been admitted before) or because of changes in the nature of those substances (e.g. increases in purity, new/emerging substances), which may increase associated health risks.

**Drug and Hospital Type**

Among new patients with a drug-related stay in 2015/16, 79% were treated in a general acute hospital only, 18% within a psychiatric hospital only and 3% in both general acute and psychiatric hospitals. Examining specific drug types, new patients experiencing health issues associated with multiple/other drugs were most likely to have stayed in a psychiatric hospital in 2015/16 (46% (including those who stayed in both types of hospital)), followed by those using cannabinoids (21%) and sedatives/hypnotics (20%). New patients using cocaine were least likely to have stayed in a psychiatric hospital in 2015/16 (5%) (Gen.acute/Psychiatric combined>Drug type – hospital>Drugs by hospital type).
Endnotes

1. Before 1996/97, diagnosis coding within SMR records was based on ICD9. ISD introduced ICD10 coding into SMR records from 1996 onwards. The coding of drug misuse diagnoses changed markedly between these two ICD versions, therefore a considerable increase in the number of drug-related hospital stays was observed between 1995/96 and 1996/97. As this change was likely to be a coding artefact rather than a real increase in drug-related stays, years prior to 1996/97 have been excluded from analyses presented in this report.

2. A new patient is an individual admitted to hospital as an inpatient within a given time period (e.g. financial year) who was found not to have received similar treatment over a specific time period before that admission – ten years in this publication. As the new patients measure incorporates a ten-year look back of SMR records, figures in the period from 1996/97 to 2005/06 would be based partly on ICD9 codes and would be likely to overestimate the number of new patients throughout this period. Therefore, new patient figures are not provided for years prior to 2006/07.

3. Note that, for analysis of the percentage of drug stays or percentage of drug patients, the sum of the drug categories is not equal to the total because more than one type of drug can be indicated in a single stay.


6. The ‘multiple/other’ drugs category includes hallucinogens, volatile solvents, multiple drug use and use of other psychoactive substances (e.g. ecstasy). This category may be used to indicate poly drug use when individual substances are not known or cannot be coded using existing diagnosis (ICD10) codes.

7. The ‘other stimulant’ category includes stimulants other than cocaine (e.g. caffeine, amphetamine, methamphetamine, BZP, PMA). See the FRANK website for more information about specific substances (http://www.talktofrank.com/drugs-a-z).

8. A higher percentage of psychiatric stays (54% compared to 14% of general acute stays) were recorded as involving ‘multiple/other’ drugs. A potential explanation for the ongoing prevalence of ‘multiple/other’ drugs in psychiatric stays is that the limitation on the recording of diagnostic information in SMR records (only six diagnoses may be recorded for any episode) may create difficulties in capturing the details of complex psychiatric clinical presentations. A further issue is that psychiatric admissions may be preceded by lengthy periods where individuals are using multiple substances, which it may be difficult to gather information upon.

Glossary

ADP  Alcohol and Drug Partnership.

Cannabinoids  Drugs related to cannabis containing chemical compounds which act on cannabinoid receptors in cells that repress neurotransmitter release in the brain. The most notable cannabinoid is tetrahydrocannabinol (THC), the primary psychoactive compound in cannabis. Psychoactive effects may include a state of relaxation, euphoria, introspection, anxiety, paranoia, increase in heart rate and hunger. This group of drugs also includes synthetic cannabinoids: designer recreational drugs such as spice that are chemically different from, but give similar effects to cannabis. Synthetic Cannabinoids have also been associated with states of ‘excited delirium’ among users, which may lead to behavioural problems and, if patients are restrained, death.

EASR  The European Standard Population (ESP), which was first used in 1976, was revised in 2013. Since publication of 2012/13 data in February 2014, the Drug Related Hospital Statistics publication has used the 2013 European Standard Population (ESP2013) to calculate European Age-Sex Standardised Rates (EASRs) for all years (including those before 2012/13). Before 2014, the publications used ESP1976 to calculate EASRs. Therefore, findings from publications since February 2014 are not comparable with earlier publications. See Appendix A1 in the 2013/14 report for further details.

Data Zone  The data zone is the key small-area statistical geography in Scotland. The data-zone geography covers the whole of Scotland and nests within local authority boundaries. Data zones are groups of 2001 Census output areas and have populations of between 500 and 1,000 household residents. Where possible, they have been made to respect physical boundaries and natural communities. They have a regular shape and, as far as possible, contain households with similar social characteristics.

Day Cases  Day cases refer to episodes where a person makes a planned admission to an available staffed bed in a hospital for clinical care, and requires the use of a bed (or trolley in lieu of a bed).

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) at data zone level, which have been combined into an overall index. Rates are reported by quintiles. Quintiles divide the population into five equal groups so that 20% of the population falls into each quintile. SIMD is updated roughly every three years and the version used depends on the year when the patient was discharged from hospital.

Discharge  This refers to the end of a given period of health care in a hospital setting known as a continuous inpatient stay (CIS) or Stay (see below). Each stay is initiated by a referral or admission and is ended by a discharge.
ICD

The International Statistical Classification of Diseases and Related Health Problems (ICD) revision is used to classify hospital admissions and deaths. The 10th revision is used in the analysis in this publication.

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.

New Patient

An individual admitted to hospital as an inpatient or day case patient within a given time period (e.g. financial year), who has not had a previous admission to hospital for the same condition/treatment within the last ten years.

Opioids

Drugs similar to heroin or morphine. Opioids include opiates (drugs derived from opium, including morphine and heroin (diamorphine)) and semi-synthetic and synthetic drugs such as hydrocodone, oxycodone and fentanyl. Opioids are most often used medically to relieve pain. The side effects of opioids may include itchiness, sedation, nausea, respiratory depression, constipation, and euphoria. The euphoria attracts recreational use, and frequent, escalating recreational use of opioids typically results in addiction. Tolerance and dependence will develop with continuous use, requiring increasing doses and leading to a withdrawal syndrome upon abrupt discontinuation. Accidental overdose or concurrent use with other depressant drugs commonly results in death from respiratory depression. Due to their association with addiction and fatal overdose, most opioid drugs are controlled substances.

Patient

An individual admitted to hospital as an inpatient or day case patient within a given time period (e.g. financial year).

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 recorded when all returns are in.

Sedatives/hypnotics

Drugs which induce sedation by reducing irritability or excitement. This group of drugs includes benzodiazepines (prescribed drugs such as diazepam, alprazolam and Novel Psychoactive Substances (such as etizolam) and z-hypnotics (such as zopiclone). While low doses reduce anxiety and produce a peaceful effect, higher doses may result in slurred speech, staggering gait, poor judgement, and slow, uncertain reflexes. Higher doses may also be used as a hypnotic to induce sleep. In the event of an overdose or if combined with another sedative, many of these drugs can cause unconsciousness and even death.

Stay

This refers to a given period of health care in a hospital setting known as a continuous inpatient stay (CIS). A CIS is composed of individual episodes (where the patient is under the care of an individual consultant). An individual (patient) may account for a number of stays during a given reporting period. Each stay is initiated by a referral or admission and is ended by a discharge.
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Contact

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Further Information

Other ISD publications on drug and alcohol misuse can be found at the drug and alcohol topic pages on the ISD website.

The Scottish Public Health Observatory (ScotPHO) provides information on various aspects of drug misuse in Scotland: ScotPHO drug misuse section.

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

Further statistics on psychiatric hospital activity are available at http://www.isdscotland.org/Health-Topics/Mental-Health/Psychiatric-Hospital-Activity/.

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

For information about the completeness, timeliness and other data quality issues regarding SMR01/SMR04 data submissions contact the Data Management Team at nss.isdDMT@nhs.net.

The next update of this publication will be in September 2018.

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Appendices

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 sources are the SMR01 (general acute inpatient and day case) and SMR04 (mental health inpatient and day case) returns.

SMR01 – General acute inpatient and day case return

The statistics presented in the first section of this report are derived from SMR01 and contain information about patients admitted to general acute hospitals, where drug misuse was diagnosed as a factor in the patient's treatment.

SMR01 is an episode based patient record relating to all inpatient and day cases discharged from specialties other than mental health, maternity, neonatal and geriatric long stay in NHS Scotland. 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. 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. Up to six diagnoses are recorded per SMR01 episode.

SMR04 – Mental health inpatient and day case return

The statistics in the second section of this report are derived from data collected through the mental health inpatient and day case return (SMR04), which records information at admission to, and discharge from psychiatric specialty care. The most recent available data for SMR04 (2015/16) is one year earlier than for SMR01 (2016/17) because a) the two-part submission of SMR04 records means that more data quality checks are required, b) patient management system changes have delayed data submission in some NHS Boards and c) the psychiatric data described in this report cannot be published before ISD’s annual Mental Health Hospital Inpatient Care report.

On the SMR04 form, up to six separate diagnoses can be recorded on both the admission and discharge parts of the record. Diagnosis on discharge may differ from diagnosis on admission. A diagnosis in the first position is regarded as the main diagnosis. A diagnosis in any of the six positions (main and supplementary) is referred to as 'in any position'.

SMR01 and SMR04 – combined analysis

The statistics presented in this section of the dashboard are derived from combined general acute (SMR01) and psychiatric (SMR04) drug-related hospital records. The most recent available data for combined analysis relates to 2015/16 as this is the latest year SMR04 data are available for.

Analysis of stays includes all general acute and psychiatric activity. However, patients are counted only once per financial year, even though the same patient may have stayed in both general acute and psychiatric hospitals on multiple occasions in that time period.
Analytical definitions

A given period of health care in a hospital setting is known as a continuous inpatient stay (CIS). A CIS is composed of individual episodes (where the patient is under the care of an individual consultant). Each individual patient may have more than one stay and hence the number of patients in a specific financial year will be less than the total number of stays for that period. As both patients and ‘new patients’ may have drug-related stays in multiple geographical areas during a financial year, the sum of stays across all geographical areas will not equal the Scotland total.

For the purposes of this report, a CIS is counted as associated with drug misuse if any of the episodes of which it is comprised include a drug misuse diagnosis in any position. Poisonings and overdoses are not included unless a diagnosis of drug misuse is also recorded. Drug misuse is recorded using the International Classification of Diseases 10th Revision (ICD10) Codes. The following codes were used in this analysis:

<table>
<thead>
<tr>
<th>ICD 10 Code</th>
<th>Description</th>
<th>ICD 10 Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F11</td>
<td>Opioids</td>
<td>F15</td>
<td>Other Stimulants</td>
</tr>
<tr>
<td>F12</td>
<td>Cannabinoids</td>
<td>F16</td>
<td>Hallucinogens</td>
</tr>
<tr>
<td>F13</td>
<td>Sedatives / Hypnotics</td>
<td>F18</td>
<td>Volatile Solvents</td>
</tr>
<tr>
<td>F14</td>
<td>Cocaine</td>
<td>F19</td>
<td>Multiple / Other Drugs</td>
</tr>
</tbody>
</table>

In data on drug type, there is an element of double counting as stays, patients and ‘new patients’ may each be associated with multiple drug types (e.g. diagnoses of both opiate and cocaine misuse). If multiple drugs have been noted in case notes, the advised coding is to record each substance in a separate diagnosis position where possible. Sometimes the coder may be forced to use the unspecific ICD-10 code F19 (‘multiple/other drugs’), for example, if case notes only state ‘multiple/other drugs’ there is no way of identifying which substances were involved. Sometimes the F19 code may be used if the patient has many other diagnoses recorded, leaving insufficient space to record specific drugs separately.

When gathering information from stays for inclusion in this report, demographic data (age, gender, deprivation quintile) are extracted from the first episode of the stay (thus corresponding most closely to the circumstances of the patient at the point they entered hospital). However, the allocated year is defined by the date of discharge. Therefore, a stay spanning two financial years (e.g. 2012/13 and 2013/14) will be counted as having occurred in the most recent of those years, or when the patient was discharged (2013/14 in this example).

Some caution is necessary when using these data as (a) drug misuse may only be suspected and may not always be recorded by the hospital, and (b) where drug misuse is recorded, it may not be possible to identify which drug(s) may be involved.

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.

Data quality

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.
Information on SMR data completeness can be found on the SMR completeness webpage, while information on the timeliness of SMR data submissions can be found on the SMR Timeliness webpage.

Note of revisions

The Health & Social Care Team aims to continually improve the interpretation of the data and therefore analysis methods are reviewed and sometimes updated. Analysis programs may be modified occasionally to reflect process changes and improvements. A number of significant methodological changes adopted recently are described below:

For the publication of 25 February 2014 (2012/13 data), two main changes were made:

- The European Standard Population (ESP), which was first used in 1976, was revised in 2013. Since publication of 2012/13 data in February 2014, the Drug Related Hospital Statistics publication has used the 2013 European Standard Population (ESP2013) to calculate European Age-Sex Standardised Rates (EASRs) for all years (including those before 2012/13). Before 2014, the publications used ESP1976 to calculate EASRs. Therefore, findings from publications since February 2014 are not comparable with earlier publications. See Appendix A1 in the 2013/14 report for further details.


In a revision to the 2012/13 publication issued on 2 September 2014:

- The structure of the age breakdown by drug type was amended to bring it into line with other drug-related publications.

The 2014/15 publication incorporated changes in the following areas:

- Correction of an error from 2013/14 report in relation to the calculation of length of stay.
- Local authority area analysis was replaced by Alcohol & Drug Partnership analysis.
- Analysis of deprivation decile was replaced by analysis of deprivation quintile.

The 2015/16 publication incorporated changes in the following areas:

- Correction of errors from previous reports in relation to the calculation of rates for the under 15 and 65 and over age groups.
- Correction of errors from previous reports in relation to the aggregation of SMR04 CISs.
## A2 – Publication Metadata (including revisions details)

<table>
<thead>
<tr>
<th>Metadata Indicator</th>
<th>Description</th>
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<tbody>
<tr>
<td>Publication title</td>
<td>Drug-Related Hospital Statistics Scotland 2016/17</td>
</tr>
<tr>
<td>Description</td>
<td>Data relating to general acute and psychiatric hospital stays with a diagnosis of drug misuse. These data are presented at a national level and also broken down by demographic characteristics/local geographies.</td>
</tr>
<tr>
<td>Theme</td>
<td>Health and Social Care</td>
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<tr>
<td>Topic</td>
<td>Substance Misuse</td>
</tr>
<tr>
<td>Format</td>
<td>PDF report with online dashboard</td>
</tr>
<tr>
<td>Data source(s)</td>
<td>ISD SMR01 &amp; SMR04</td>
</tr>
<tr>
<td>Date that data are acquired</td>
<td>July 2017</td>
</tr>
<tr>
<td>Release date</td>
<td>Tuesday 26 September 2017</td>
</tr>
<tr>
<td>Frequency</td>
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</table>
| Timeframe of data and timeliness | General acute (SMR01) – information from the period 01/04/1996 to 31/03/2017. Analysis based on the period 1996/97 to 2016/17.  
Psychiatric (SMR04) – information from the period 01/04/1996 to 31/03/2016. Analysis based on the period 1997/98 to 2015/16.  
General acute & psychiatric combined (SMR01 & SMR04) – information from the period 01/04/1996 to 31/03/2016. Analysis based on the period 1997/98 to 2015/16. |
| Continuity of data | See background information. |
| Revisions statement | All data are revised annually to reflect any changes to analysis and to ensure the most complete information is presented. Data for the most recent financial year are labelled as provisional and may be subject to change in forthcoming publications. Minor revisions of this nature are often due to incomplete data returns at the time of the previous publication. |
| Revisions relevant to this publication | None. |
| Concepts and definitions | See Glossary.  
Also, refer to:  
Hospital Care - Background Information: [http://www.isdscotland.org/Health-Topics/Hospital-Care/](http://www.isdscotland.org/Health-Topics/Hospital-Care/)  
<table>
<thead>
<tr>
<th>Relevance and key uses of the statistics</th>
<th>Relevant to understanding problem drug use in Scotland. Statistics will be used for policy making and service planning.</th>
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</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Quality checks are conducted by ISD. Figures are compared to previously published data and expected trends.</td>
</tr>
<tr>
<td>Completeness</td>
<td>Details of data submission issues are available on the SMR Completeness webpage.</td>
</tr>
<tr>
<td>Comparability</td>
<td>The NHS Health and Social Care Information Centre (HSCIC) publishes figures on Hospital admissions for drug-related mental health and behavioural disorders in England but should not be directly compared with published data from Scotland. For more information see the Background information on the ISD Hospital Care webpage.</td>
</tr>
<tr>
<td>Accessibility</td>
<td>It is the policy of ISD Scotland to make its websites and products accessible according to published guidelines.</td>
</tr>
<tr>
<td>Coherence and clarity</td>
<td>The report is available as a PDF file with dashboard content clearly highlighted for ease of use.</td>
</tr>
<tr>
<td>Value type and unit of measurement</td>
<td>Numbers, percentages and European Age-Sex Standardised Rates per 100,000.</td>
</tr>
<tr>
<td>Disclosure</td>
<td>The ISD protocol on Statistical Disclosure Protocol is followed and data relating to very small numbers is suppressed.</td>
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<tr>
<td>Official Statistics designation</td>
<td>Accredited National Statistic</td>
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<tr>
<td>Last published</td>
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<td>Next published</td>
<td>September 2018</td>
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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.

Standard Pre-Release Access:

Scottish Government Health Department

NHS Board Chief Executives

NHS Board Communication leads
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.