

Drug-Related Hospital Statistics

Scotland 2021/22

A National Statistics release for Scotland

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Introduction

This release by Public Health Scotland reports on hospital stays in relation to a drug use diagnosis. 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 publication also includes a monthly breakdown of drug-related hospital stays, along with a detailed description of changes in activity during the COVID-19 pandemic.

Data used in this report

This report includes information on inpatient and daycase activity in general acute and psychiatric specialties in Scotland, where drug use was recorded as a diagnosis at some point during the patient's hospital stay. The information reported in this publication is a combination of data from the following sources:

- General acute inpatient and day case records (SMR01), years 1996/97 to 2021/22
- Psychiatric inpatient and day case records (SMR04), years 1996/97 to 2021/22

A minor change to the ICD codes used to identify specific substances in drug poisoning/overdoses stays was made this year, and retrospectively applied to earlier year's data. Therefore, the numbers and rates presented in this publication may be different to those presented in previous publications. See [Appendix 1](#) for more detail.

Terminology

Within this report, the use of technical/statistical terms (e.g. opioids, stays, 'new patients') is sometimes unavoidable. For further explanation of these terms, please refer to the [Glossary](#).

Main points

In 2021/22:

- There were 12,474 drug-related hospital stays. The drug-related hospital stay rate was 235 stays per 100,000 population. This rate decreased for the second consecutive year, from a peak of 283 per 100,000 population in 2019/20.
- The highest substance-specific stay rate (106 per 100,000 population) was for opioids (drugs similar to heroin). This rate decreased for the second consecutive year, from a peak of 141 per 100,000 population in 2019/20.
- The highest patient rate (412 per 100,000 population) was observed among people aged 35-44 years. This rate decreased for the second consecutive year, from a peak of 517 per 100,000 population in 2019/20.
- Approximately half of the patients with a drug-related hospital stay lived in the most deprived areas in Scotland.
- Between May 2021 and March 2022, the number of stays each month was approximately one quarter lower than the average number of stays in the same months of 2018 and 2019. This period of lower-than-expected stays partly coincided with the COVID-19 restrictions in place from December 2021 to January 2022, however the reasons for the sustained decreases are not yet fully understood.
- The rate of stays for drug poisoning/overdose decreased to 32 stays per 100,000 population from a peak of 42 stays in 2020/21. This was the first decrease in overdose stay rates since 2012/13 (22 stays per 100,000 population).
- Drug-related hospital stay rates decreased sharply since 2019/20 among people aged under 45 years but have remained fairly stable in patients aged 45 years and older. People aged 45 years and over were more likely to have been admitted to hospital multiple times for drug-related causes and stayed in hospital for longer than people aged under 45.

Results and commentary

This report focusses on combined general acute and psychiatric drug-related stays. As well as overall trends in drug-related hospital stays, it addresses specific topics such as drug overdoses, and changes in rates of stays by age group. For a comprehensive breakdown of drug-related hospital stays, see the accompanying [dashboard](#).

The definition of a drug-related hospital stay includes drug poisonings/overdoses and mental & behavioural stays. For further information on the ICD10 codes used to define these groups, see [Methods](#).

Discussion of drug-related psychiatric and combined general acute/psychiatric hospital trends is based on the period from 1997/98 to 2021/22. As psychiatric hospital (SMR04) stays are typically longer than general acute hospital (SMR01) stays, psychiatric episode data are submitted in two parts and compiled and quality assured over a longer time period. 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 dashboard, the commentary in all sections (other than those specifically discussing general acute hospital stays only) are based on the period from 1997/98 onwards, when SMR04 data appear to be more consistent.

Throughout this report, we make reference to 'stays', 'patients' and 'new patients'. A 'stay' refers to a continuous period of time spent in a hospital setting. A 'patient' is an individual admitted to hospital. Each patient may have more than one stay within a financial year. A 'new patient' is an individual who has not had a drug-related stay in hospital within the previous ten years.

Patient deprivation quintiles are referred to throughout the report. Quintiles divide the population into five equal groups so that 20% of the population of Scotland falls into each quintile (deprivation quintile 1 is the most deprived, deprivation quintile 5 is the least deprived). Small geographical areas are assigned to quintiles based upon the [Scottish Index of Multiple Deprivation](#) (SIMD) which calculates deprivation rates with reference to a range of social and economic indicators.

For further information on definitions used in this report, see the [Methods](#) section of the dashboard.

Further background information and a comprehensive list of revisions to this publication is available in the [Background Information](#) .

For further explanations of technical terms, please refer to the [Glossary](#).

Statistical disclosure control has been applied to protect patient confidentiality. Therefore, the figures presented in these statistics may not be additive and may differ to those reported in previous publications.

1. Overall patterns and trends

The information in this section covers all drug-related hospital stays in Scotland. Data from general acute and psychiatric hospitals are combined and all diagnoses relating to drug use (mental & behavioural and overdose/poisoning diagnoses) are included.

For data relating to each individual hospital type or diagnosis type, please see the [dashboard](#).

Stays, Patients, New patients

The rate of drug-related hospital stays in 2021/22 was 235 stays per 100,000 population. This was the second successive year in which a decrease was observed (2020/21: 270 stays per 100,000 population). Prior to this, the combined drug-related stay rate increased steadily over the time series, increasing more than threefold from 87 to 283 stays per 100,000 population between 1997/98 and 2019/20 (Figure 1.1).

A person may have more than one drug-related hospital stay within a financial year. In 2021/22, there were 12,474 drug-related hospital stays among 9,198 patients. Changes in the patient rate closely corresponded with changes in the stay rate. The drug-related patient rate increased threefold from 68 to 207 patients per 100,000 population during the period 1997/98 to 2019/20 and has since decreased to 173 in 2021/22 (Figure 1.1).

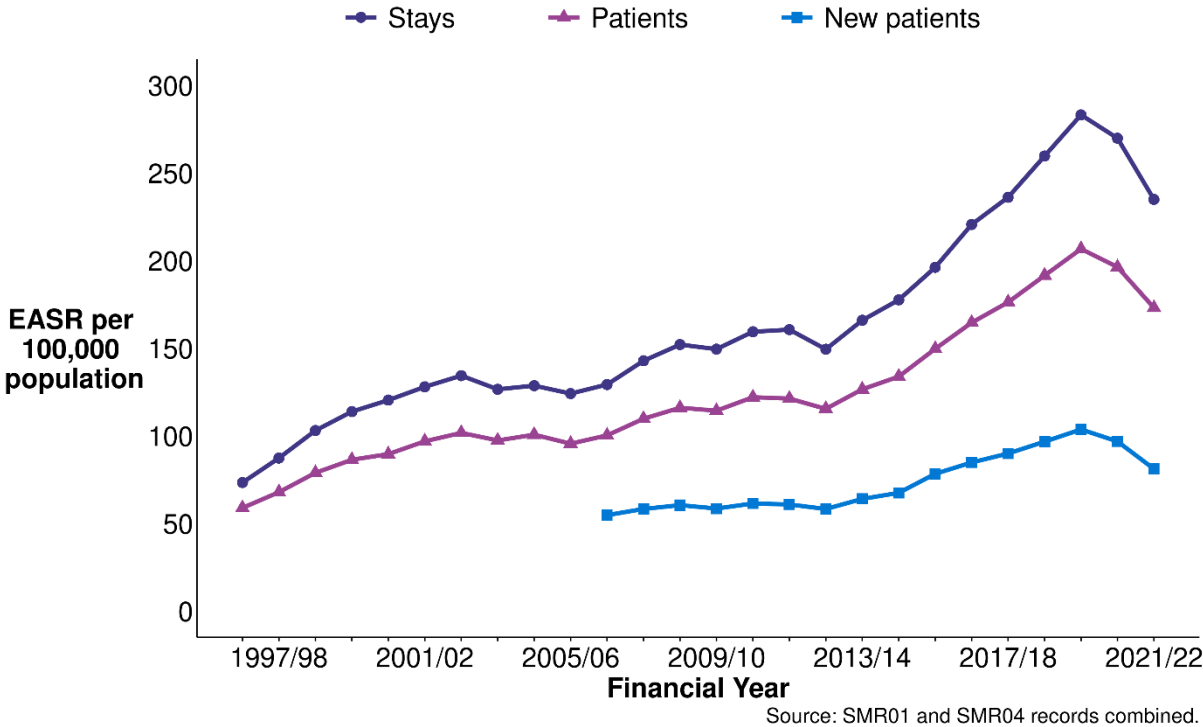
Patients were classed as 'new' patients if they had not had a drug-related stay in hospital within the previous ten years. In 2021/22, there were 4,365 new patients. Therefore, 47% of the drug-related patients in 2021/22 had not had a similar stay in hospital within the previous ten years. Although numbers of drug-related stays and patients increased over time, the percentage of new patients was approximately 51% between 2009/10 and 2020/21. 2021/22 was the first year that less than 50% of patients have not had a similar stay in hospital in the previous ten years.

The drug-related new patient rate varied little from 2006/07 to 2012/13 (from 55 to 58 new patients per 100,000 population) and then gradually increased to 104 in

2019/20. As with the other rates described here, this decreased in the past two years, reaching 81 new patients per 100,000 population in 2021/22 (Figure 1.1).

For all three measures (stays, patients and new patients), a series of consistent rate increases were recorded from 2012/13 to 2019/20, before decreases were observed in 2020/21 and 2021/22. In order to help determine if this change was associated with COVID-19, monthly drug-related stays from January 2020 to March 2022, along with comparisons with the two previous years, are described in the **COVID-19** section.

Figure 1.1: Drug-related general acute/psychiatric combined hospital rates^{†‡} by activity type (Scotland; 1996/97 to 2021/22^p)



† Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.

‡ See **Glossary** for definitions of stays, patients and new patients.

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Hospital type

In each year of the time series, drug-related general acute stays outnumbered comparable psychiatric stays. In 2021/22, of a total of 12,474 drug-related hospital

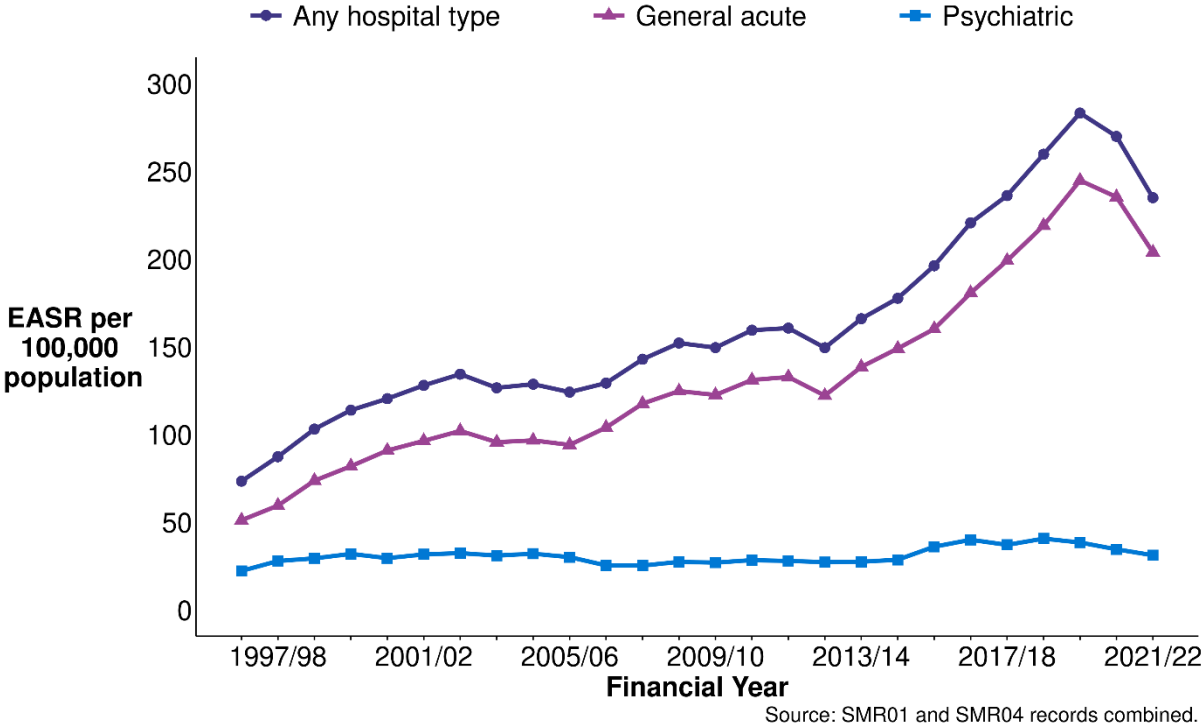
stays, 87% (10,803) were in general acute hospitals, and 13% (1,668) were in psychiatric hospitalsⁱ. A similar breakdown was observed in 2020/21.

As most drug-related hospital stays were in general acute hospitals, changes in the rate of drug-related stays in general acute hospitals have a strong influence on the combined or 'any hospital' drug-related hospital stay rate. In 2021/22, the rate of drug-related stays in general acute hospitals was 204 stays per 100,000 population, a decrease from 235 stays per 100,000 population in 2020/21. 2021/22 was the second consecutive year in which this rate has decreased. Prior to this, there was a general increase in this rate between 1996/97 (51 stays per 100,000 population) and 2019/20 (245 stays per 100,000 population) (Figure 1.2).

In 2021/22, the rate of drug-related stays in psychiatric hospitals was 31 stays per 100,000 population. This was a decrease from 35 stays per 100,000 population in 2020/21. After a lengthy period of stability, the rate of drug-related psychiatric stays increased from 29 to 40 stays per 100,000 population between 2014/15 and 2016/17 and remained approximately the same until 2019/20 (Figure 1.2).

ⁱ Due to the statistical disclosure procedures applied to this data, numbers may not be additive.

Figure 1.2: Drug-related stay rates by hospital type^{†‡} (Scotland; 1996/97 to 2021/22^p)



† Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.

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

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Diagnosis type

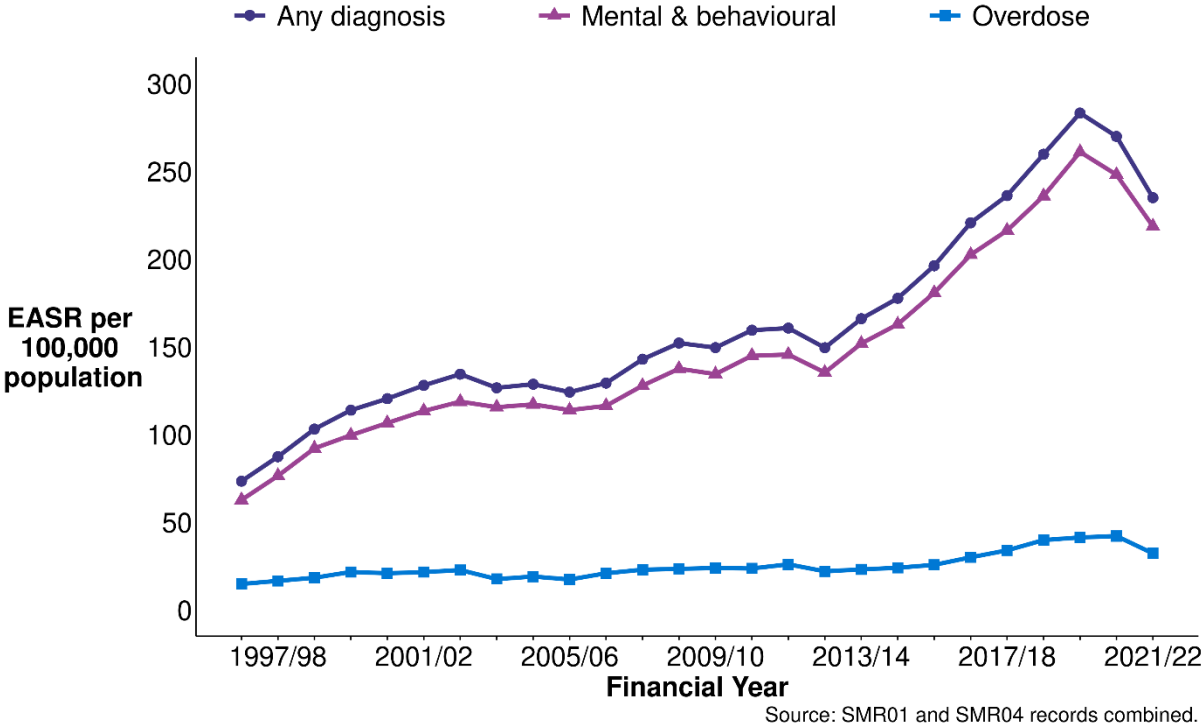
In 2021/22, of the 12,474 drug-related combined hospital stays, 11,592 (93%) included a drug-related mental & behavioural diagnosis and 1,722 (14%) included a drug poisoning/overdose diagnosisⁱⁱ (Figure 1.3).

In 2021/22 there was a further decrease in the rate of drug-related mental & behavioural stays to 219 stays per 100,000 population. This was the second consecutive year in which a decrease was recorded, after rates peaked in 2019/20 (261 stays per 100,000 population, a 16% decrease). Before this, rates had increased fairly consistently over the time series, with a series of substantial increases observed between 2012/13 and 2019/20. The 2021/22 rate of drug-related mental & behavioural stays (219 stays per 100,000 population) was more than three times higher than the rate observed in 1997/98 (76) (Figure 1.3).

The rate of drug poisoning/overdose stays in 2021/22 decreased sharply to 32 stays per 100,000 population, from 42 stays in 2020/21. This was the first year since 2012/13 in which rate of drug poisoning/overdose stays decreased. For more detailed analysis on drug poisoning/overdose stays, see the [Overdose section](#) in this report.

ⁱⁱ The sum of these percentages is greater than 100% as stays may include a diagnosis from each of these groups. A total of 840 (7%) drug-related stays included a diagnosis of both types (i.e. a mental & behavioural diagnosis and a drug poisoning/overdose diagnosis).

Figure 1.3: Drug-related general acute/psychiatric combined stay† rates‡, by diagnosis type (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
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Length of stay

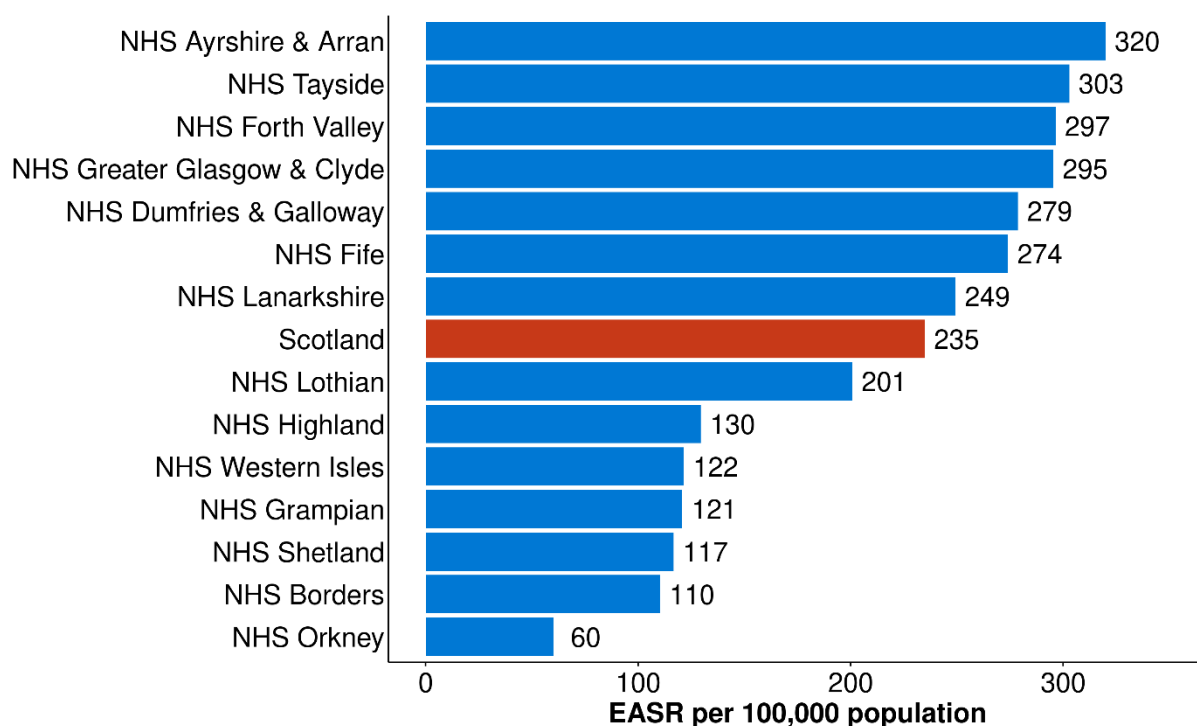
In 2021/22, 56% of drug-related general acute hospital stays were for one day or less. This was a decrease compared to the previous year (2020/21: 61%) and was similar to the long-term trend observed between 2002/03 and 2019/20, when stays for one day or less ranged between 54% and 58% of total stays in general acute hospitals. Of the remaining stays in 2021/22, 30% were between two and six days and 14% of stays were for one week or longer.

Drug-related psychiatric hospital stays tended to be longer than general acute stays, with 67% of stays in 2021/22 lasting for one week or longer.

Geography

Drug-related hospital stay rates varied widely by NHS Board (Figure 1.4). In 2021/22, the highest rates were seen in Ayrshire & Arran (320 stays per 100,000 population), Tayside (303), and Forth Valley (297). Among mainland NHS Boards, the lowest rate was observed in Borders (110 stays per 100,000 population).

Figure 1.4: Drug-related general acute/psychiatric combined stay[†] rates[‡], by NHS Board of Residence (Scotland; 2021/22^p)



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

‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.

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Drug type

For this publication, a minor change to the ICD codes used to identify specific substances in drug poisoning/overdose stays was made. The overall number of stays remains the same, but there may be more stays identified with the individual drugs implicated in the stay. See [Appendix 1](#) for information.

In 2021/22, the rate of opioid-related stays was 106 per 100,000 population. This was a decrease compared to both the 2019/20 rate (141 stays per 100,000 population) and the 2020/21 rate (128 stays per 100,000 population). Before these decreases, the rate of opioid-related stays had increased fairly consistently from 1997/98 (35 stays per 100,000 population) to 2019/20 (Figure 1.5). The percentage of drug-related stays attributed to opioids increased from 40% (1,995) in 1997/98 to 64% (5,478) in 2011/12. This percentage has since decreased to 44% (5,532) in 2021/22.

The rate of stays attributed to 'multiple/other' drugs was 56 stays per 100,000 population in 2021/22. As with opioids, this was the second consecutive year in which this rate decreased (2020/21: 61 stays per 100,000 population). This rate was fairly stable from 2005/06 to 2012/13 (33 and 34 stays per 100,000 population respectively) and then gradually increased to 64 stays per 100,000 population in 2019/20 (Figure 1.5).

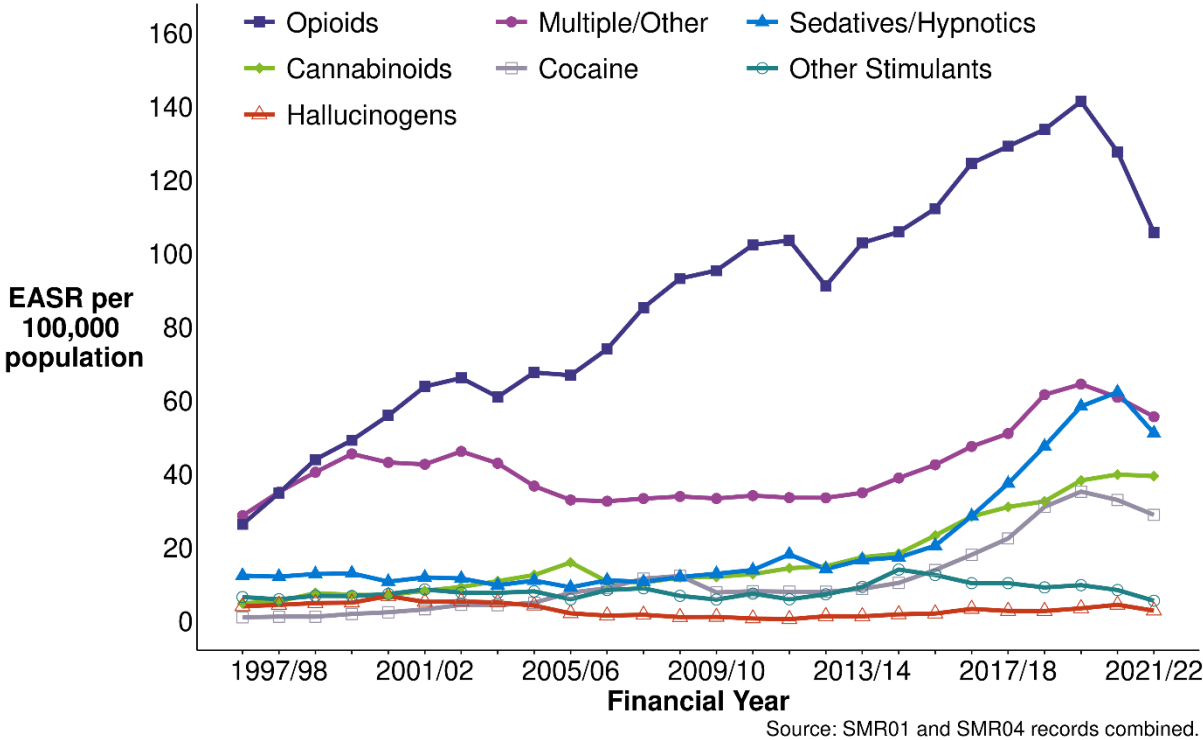
In 2021/22, the sedative/hypnoticⁱⁱⁱ stay rate (51 stays per 100,000 population) decreased compared to 2020/21 (62 stays per 100,000 population), when the highest rate was recorded. The rate of sedative/hypnotic-related stays was consistently between 9 and 13 stays per 100,000 population between 1997/98 and 2009/10, but then increased more than fivefold to its peak in 2020/21 (62). In 2021/22, sedatives/hypnotics were the third most commonly reported drug category after opioids and 'multiple/other' (Figure 1.5).

The 2021/22 cannabinoid stay rate (39 stays per 100,000 population) was approximately the same as in 2020/21 (40, the highest yet recorded). The rate of cannabinoid-related stays has increased almost eightfold from 5 stays per 100,000 population in 1997/98, with a marked rise from 2014/15 (18 stays per 100,000 population) (Figure 1.5).

ⁱⁱⁱ This group of drugs includes 'prescribable' benzodiazepines (drugs such as diazepam), 'street' benzodiazepines (for example, etizolam and alprazolam) and z-hypnotics (for example, zopiclone). See [Glossary](#) for more detail.

In 2021/22, the cocaine stay rate (29 stays per 100,000 population) was lower than in 2020/21 (33 stays per 100,000 population). This was the second consecutive year in which it has decreased. The rate of cocaine-related stays was below 10 stays per 100,000 population in most years between 1997/98 (1) and 2013/14 (9), after which it increased substantially to 35 stays per 100,000 population in 2019/20 (Figure 1.5).

Figure 1.5: Drug-related general acute/psychiatric combined stay† rates‡, by drug type* (Scotland; 1996/97 to 2021/22^p)



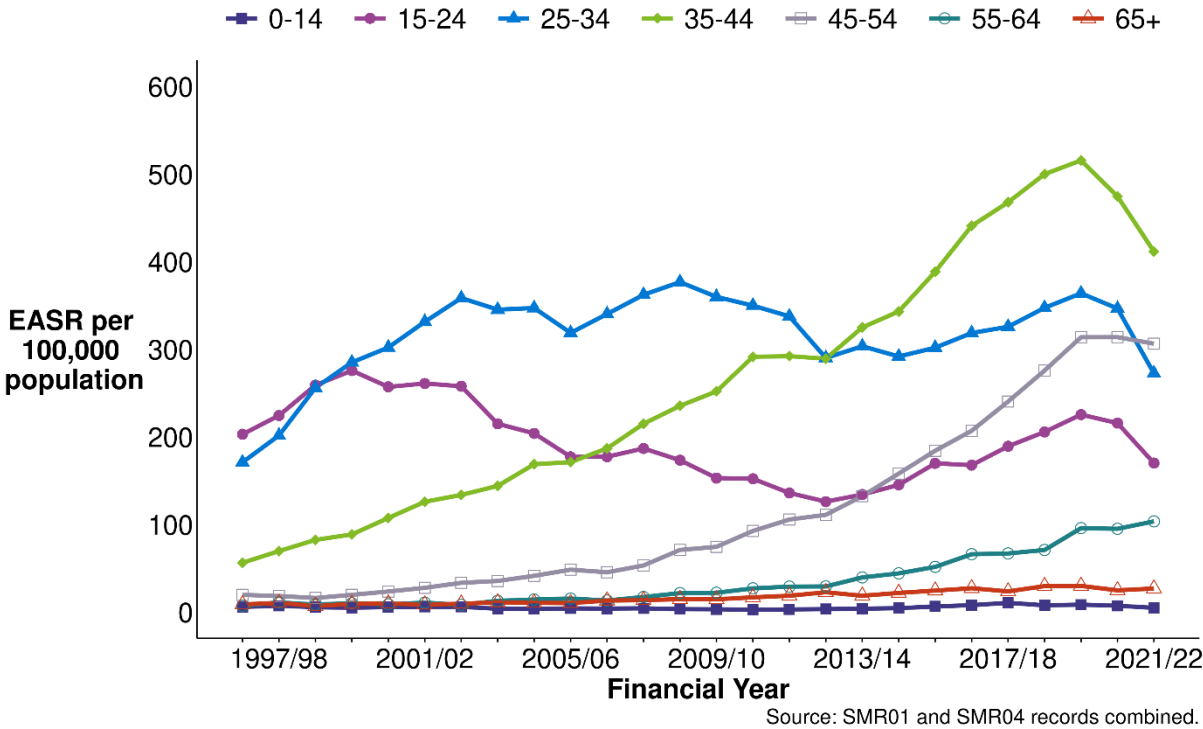
† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 * For an explanation of the drug types referred to, see **Glossary**.
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Age group

The most common age of patients admitted for a drug-related hospital stay in 2021/22 were patients aged 35-44 years (Figure 1.6). The patient rate for this age group increased from 70 patients per 100,000 population in 1997/98 to 516 per 100,000 in 2019/20. While patient rates for 35–44-year-olds have decreased

substantially in the two years since 2019/20, (2020/21: 474 patients, 2021/22: 412 patients) it remained the most common age group among patients with a drug-related hospital stay in 2021/22.

Figure 1.6: Drug-related general acute/psychiatric patient† rates‡, by age group (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
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There was a clear upward trend in drug-related patient rates among 45–54-year-olds from 1997/98 (18 patients per 100,000 population) to 2019/20 and 2020/21 (both 314). In 2021/22, there was a slight decrease to 306 patients per 100,000 population.

For the 25-34 age group, patient rates fluctuated between 290 and 377 patients per 100,000 population in the period from 2000/01 to 2014/15. A series of increases since 2014/15 brought the rate to 364 patients per 100,000 population in 2019/20. Since then, the rate decreased in 2020/21 (347 and patients per 100,000 population)

and again, more sharply, in 2021/22 (273 per 100,000 population) - the lowest seen in the past 20 years (Figure 1.6).

Patient rates among 15–24-year-olds decreased to 170 patients per 100,000 population in 2021/22 compared to 216 in 2020/21. Following a long-term decrease early in the time series, patient rates for people aged 15-24 years had increased from 126 in 2012/13 to 225 patients per 100,000 population in 2019/20.

Patient rates in those aged 55-64 continued to increase, rising from 8 patients per 100,000 population in 2002/03 to 104 patients per 100,000 population in 2021/22 (the highest on record for this age group). Patient rates among people aged over 65 years increased from 10 per 100,000 population in 2002/03 to 30 in 2019/20 and have since decreased slightly to 25 in 2020/21 and 27 in 2021/22. The 55-64 year and 65+ age groups were the only groups where increases in patient rates were recorded in 2021/22, compared to the previous year.

The youngest age group has consistently had the lowest level of patient rates over the time series. Rates for 2021/22 were 5 patients per 100,000 population.

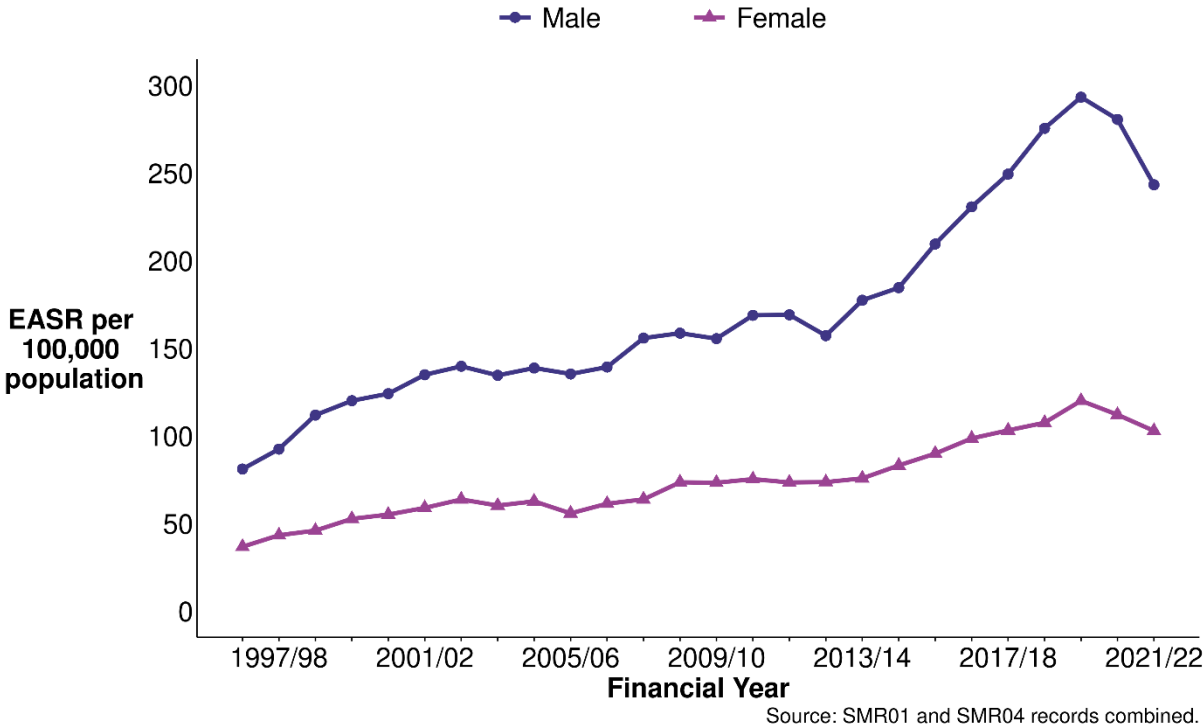
Trends in drug-related patient rates provide clear evidence of an ageing patient profile^{iv}. The average age of patients admitted to hospital in Scotland for a drug-related event has increased from 27 to 40 over the time series. Compared to 2020/21, rates in the older age groups were either relatively stable (age 45-54) or had increased (age 55-64 and 65+) in 2021/22. In contrast to this, rates had decreased in the younger age groups. More information on differences by age cohort can be found in the section **Drug-related hospital stays in younger and older people**.

^{iv} **‘Older People with Drug Problems in Scotland: Addressing the Needs of an Ageing Population’** (Scottish Drugs Forum, 2017).

Sex

In 2021/22, 70% of patients who had a drug-related hospital stay were males (6,408 patients, rate: 243 patients per 100,000 population). The rate for females was 103 patients per 100,000 population (2,790 patients). Between 1997/98 and 2012/13, the average sex ratio was 219 male patients for every 100 female patients. From 2012/13 the rate of male patients increased more sharply than for female patients, and in 2021/22 the ratio was 230 male patients for every 100 female patients. Male and female patient rates both followed similar trends, each increasing more than threefold over the time series, and both decreasing in 2020/21 and 2021/22 (Figure 1.7).

Figure 1.7: Drug-related general acute/psychiatric patient† rates‡, by sex (Scotland; 1996/97 to 2021/22^p)

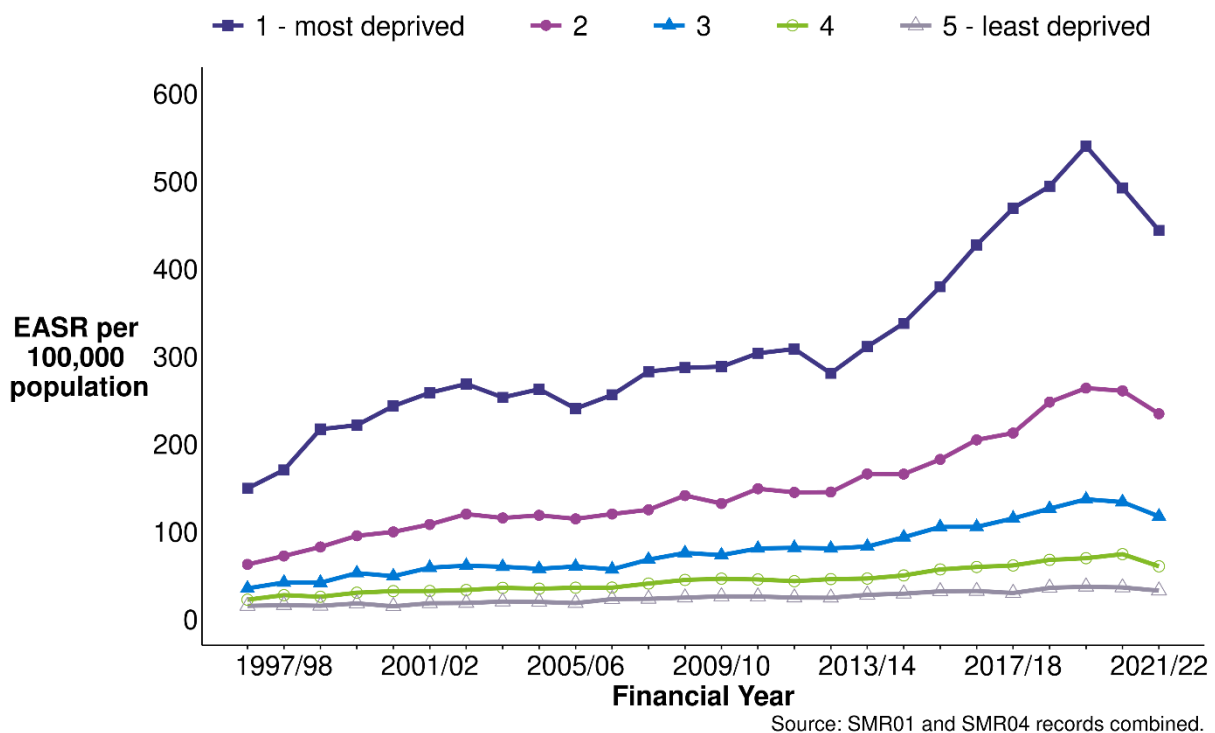


† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
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Deprivation

Patients from the most deprived areas were most likely to experience a drug-related hospital stay in Scotland. In 2021/22, 50% of patients (4,590: 444 patients per 100,000 population) lived in deprivation quintile 1 (Figure 1.8). This was consistent across the time series, with approximately half of patients with a drug-related general acute/psychiatric stay living in the 20% most deprived areas in Scotland (deprivation quintile 1) in each year. Drug-related patient rates decreased across all deprivation quintiles during 2021/22, compared to 2020/21.

Figure 1.8: Drug-related general acute/psychiatric patient[†] rates[‡], by deprivation* quintile (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.

‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.

* For an explanation of deprivation measures (Scottish Index of Multiple Deprivation), see **Glossary**.

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Among people living in the most deprived areas (deprivation quintile 1), drug-related patient rates almost doubled between 2012/13 to 2019/20 (218 to 540 patients per 100,000 population), before decreasing to 444 patients per 100,000 population by 2021/21. However, the largest percentage increase over the time series was observed in quintile 2, where patient rates increased from 42 to 264 patients per 100,000 population between 1997/98 and 2019/20 before decreasing to 234 patients per 100,000 population in 2021/22 (Figure 1.8).

2. Hospital stays during the COVID-19 pandemic

The statistics presented in this report so far have described a decrease in drug-related hospital activity during 2020/21 and 2021/22, which was inconsistent with the long-term upward trend observed until 2019/20.

During 2020/21 and 2021/22, health services in Scotland and other countries were impacted by the COVID-19 pandemic. The UK entered a period of lockdown from 23 March 2020. Varying levels of restrictions were introduced and subsequently lifted between March 2020 and March 2022^v.

In order to assess the continuing impact of COVID-19 on drug-related hospital activity, the analysis below compares the number of stays per month from January 2020 to March 2022, with an average based on the number of stays observed per month in two recent pre-COVID-19 calendar years (2018 and 2019). As the initial stages of the pandemic occurred at the end of financial year 2019/20 and the start of financial year 2020/21, the analysis below focuses on the time period from the start of calendar year 2020 to the end of March 2022. This differs from the rest of this report, which focuses on hospital activity in each financial year.

It is not known if the observed changes in the number of stays reflects a genuine difference in the number of such conditions, or changes in hospital admission policies associated with the pandemic or other factors. While hospital pressures may have eased during the summer 2020 and 2021 periods there were still many social restrictions in place, such as indoor social distancing, and nightclub closures, which may have had an influence on drug use and access to services.

Monthly stays

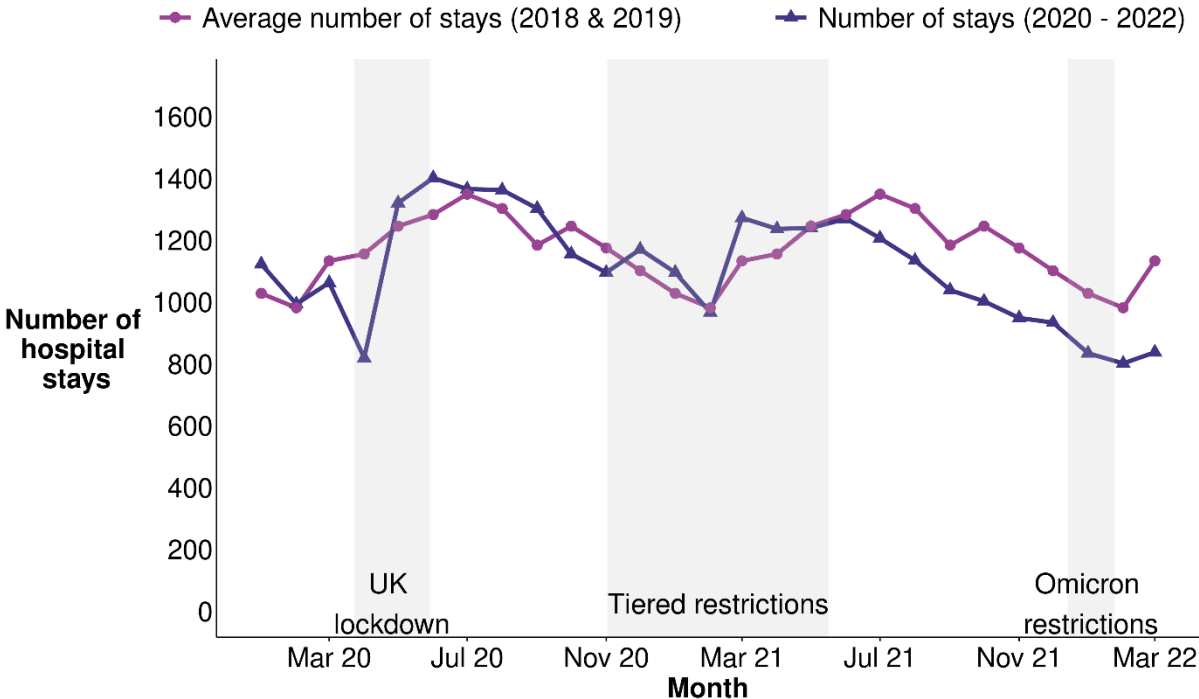
In April 2020, as Scotland was in the early stages of the first COVID-19 lockdown, there were 819 drug-related hospital stays (Figure 2.1). This was 29% lower than the

^v More information on the timeline of COVID-19 events can be found at the [Scottish Parliamentary Information Centre \(SPICe\)](#)

two-year average for April (1,155). Subsequently, the number of stays increased to 1,317 in May 2020, which was 6% higher than the May 2018 & May 2019 average (1,244). From May 2020 to June 2021, drug-related hospital stays were broadly similar to the 2018 and 2019 average, ranging between 10% above or 10% below the two-year average.

Numbers of drug-related hospital stays in May and June 2021 were approximately 1% lower than the 2018 & 2019 average for the same months. From July 2021 to March 2022, the number of drug-related stays was markedly lower than comparable months in the 2018 & 2019 average: decreasing from 10% lower (July 2021) to 26% lower (March 2022). In February 2022, the number of drug-related hospital stays reached the lowest point seen since the April 2020 lockdown (801 stays). This was an 18% decrease compared to February 2018 and 2019, and a 17% decrease compared to February 2021. In March 2022, the number of stays had increased slightly to 837.

Figure 2.1: Number of drug-related general acute/psychiatric hospital stays[†], by month (Scotland; January 2020 to March 2022^p)



Source: SMR01 and SMR04 records combined.

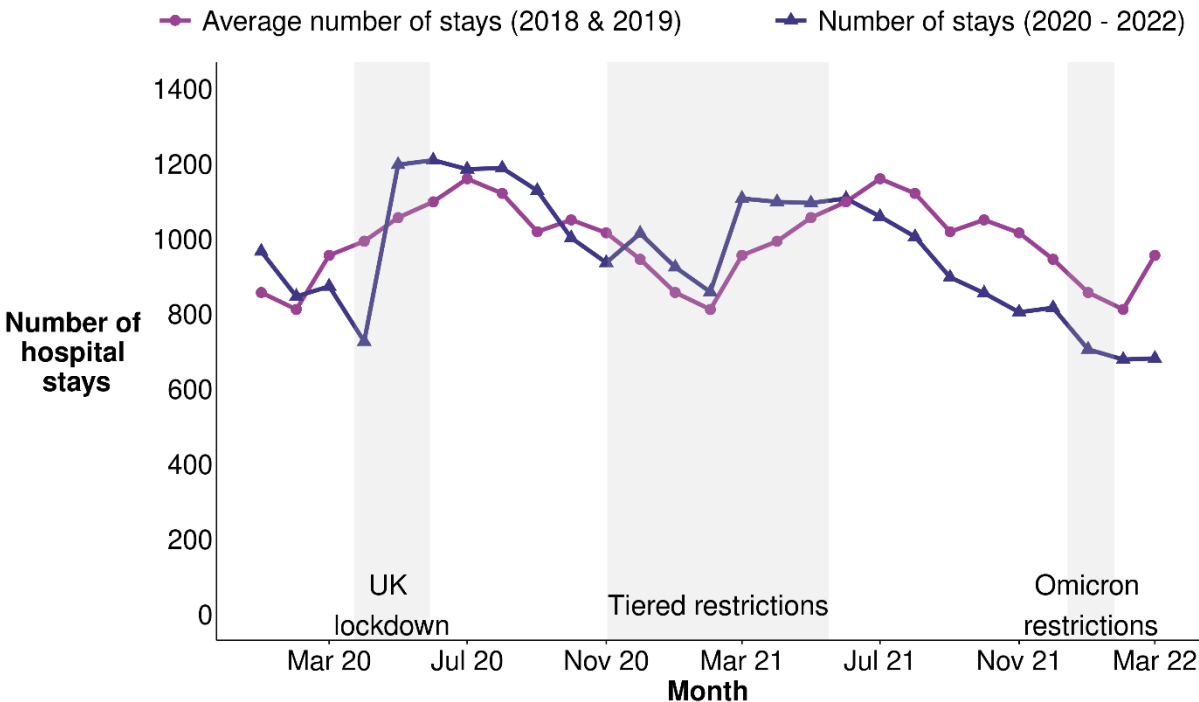
[†] See **Glossary** for definitions of stays.

^p Provisional.

Hospital type

In April 2020, the number of drug-related stays in general acute hospitals was 27% lower than the two-year average (Figure 2.2). Between May 2020 and April 2021, the number of stays was generally higher than the two-year average, ranging between 2% and 16% above. From July 2021 to March 2022, the number of drug-related hospital stays in general acute hospitals decreased below the two-year average, ranging between 9% (July 2021) and 29% (March 2022) lower. The number of stays in February and March 2022 were the two lowest monthly stays since 2017/18 (678 and 681 respectively).

Figure 2.2: Number of drug-related general acute hospital stays†, by month (Scotland; January 2020 to March 2022^p)



Source: SMR01 only

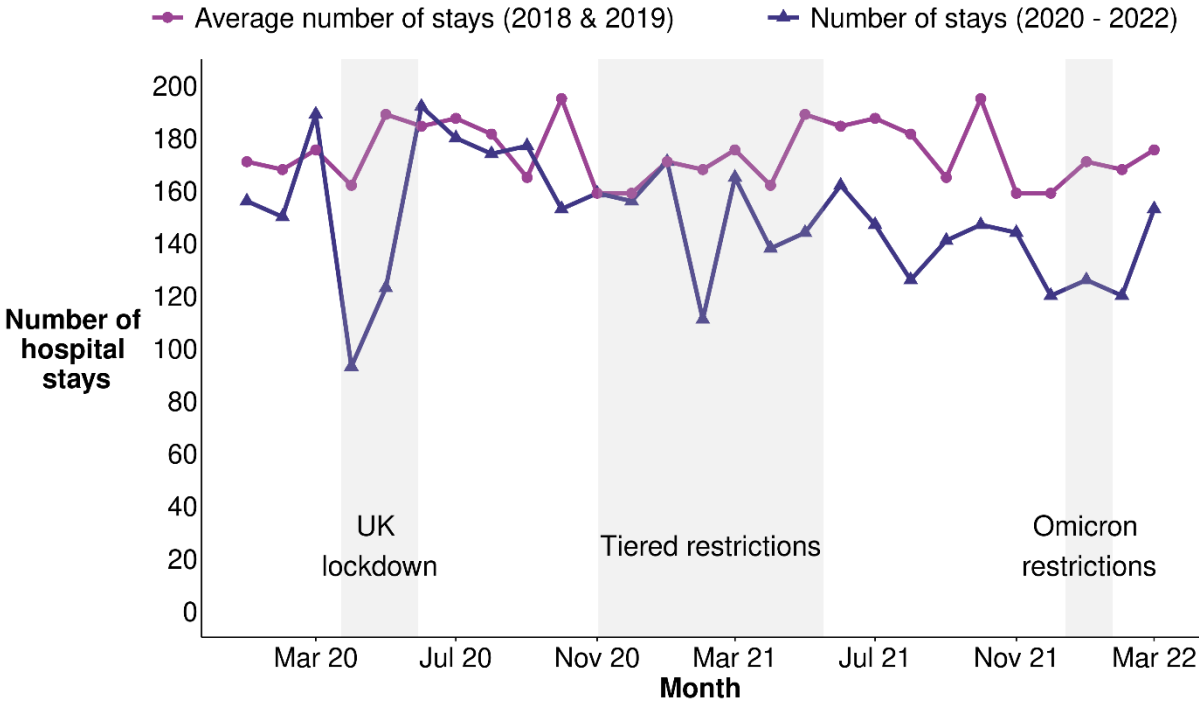
† See **Glossary** for definitions of stays.

^p Provisional.

The number of drug-related stays in psychiatric hospitals was 42% lower than the two-year average in April 2020 and 37% lower in May 2020 (Figure 2.3). The more prolonged decrease in the number of psychiatric stays (compared with general acute stays) may be a reflection of their longer duration (see length of stay in **Overall**

patterns and trends), and because stays are counted at the point of discharge from hospital. For the period from June 2020 to March 2021 the number of stays were broadly between 8% above and 8% below the two-year average, with a notable exception in February 2021 (38% below the two-year average). Between April 2021 and March 2022, the number of drug-related hospital stays in psychiatric hospitals remained below the two-year average, ranging between 9% lower (November 2021) and 31% lower (August 2021).

Figure 2.3: Number of drug-related psychiatric hospital stays[†], by month (Scotland; January 2020 to March 2022^p)



Source: SMR04 only

† See **Glossary** for definitions of stays.

p Provisional.

Diagnosis type

In April 2020, the number of general acute and psychiatric hospital stays with a mental & behavioural diagnosis was 30% lower than the two-year average (April 2020; 744, April two-year average; 1,058). However, in May and June 2021, the number of stays with a mental & behavioural diagnosis was largely similar to the two-year average, ranging between 10% above and 7%. From July 2021 through to

March 2022, the number of stays remained below the two-year average, increasing from 8% lower to 25% lower.

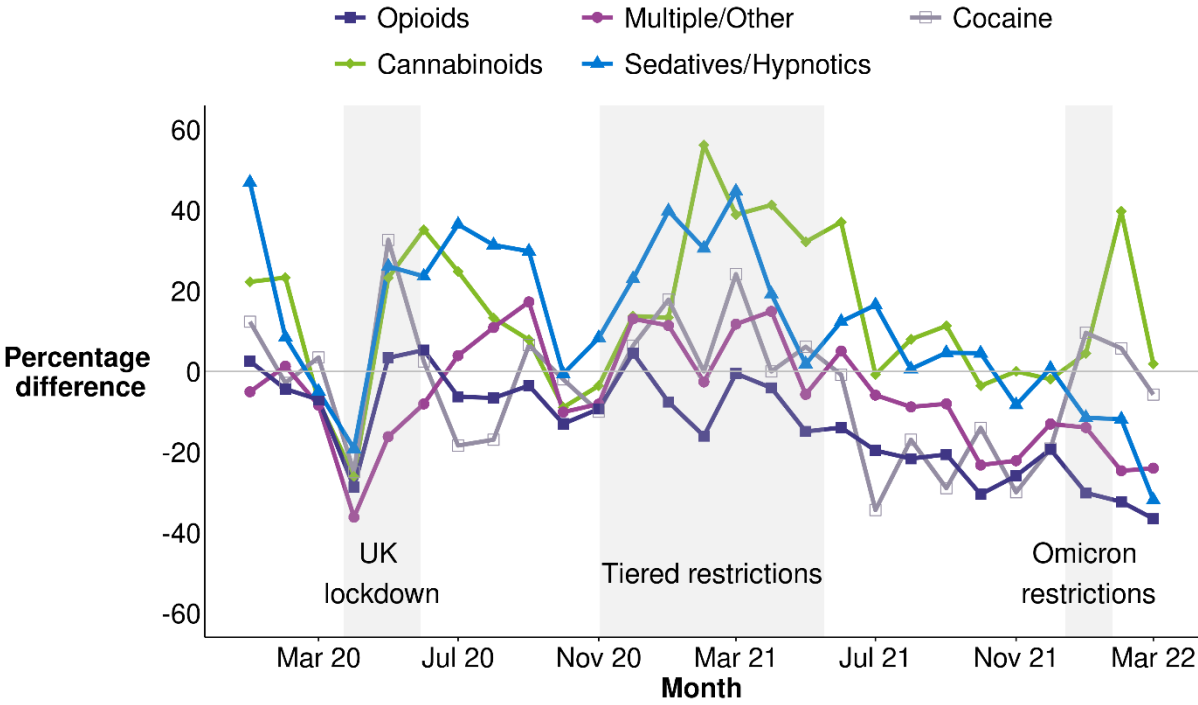
During the initial stages of the COVID-19 pandemic, the number of hospital stays with an overdose diagnosis decreased less markedly than for mental & behavioural diagnoses. In April 2020, the number of overdose stays was 11% lower than the two-year average (April 2020; 153, April two-year average; 171). From May 2020 to April 2021, the number of overdose stays was above the two-year average in most months. From May 2021 to March 2022, the number of overdose stays remained below the two-year average, ranging between 9% (September 2021) and 44% (November 2021) lower. There were 99 hospital stays for overdoses in November 2021, the lowest number of monthly stays since 2016/17.

Drug type

As well as differences in the number of hospital stays in 2021/22, compared to the average of 2018 and 2019, there were also differences in the number of stays associated with specific drug types during this time period. As noted in the section on **Overall patterns and trends**, between 2019/20 and 2020/21 there was a decrease in the number of hospital stays associated with opioids, 'multiple/other' and cocaine, while there was an increase in the number of stays for sedatives/hypnotics and cannabinoids. Numbers of stays for all of these drugs decreased in 2021/22.

Opioid-related hospital stays were 4% lower in April 2021 compared to the two-year average. From May 2021 to March 2022, opioid-related hospital stays remained lower than the two-year average (Figure 2.4). As opioid-related stays accounted for nearly half of all drug-related hospital stays each month (ranging from 42% to 51% across 2020/21 and 2021/22), this change has contributed substantially to the decreasing overall drug-related hospital stay rates described in this report.

Figure 2.4: Percentage difference in the number of drug-related general acute/psychiatric hospital stays, by month and drug type[†] (Scotland; January 2020 to March 2022^p, relative to the average of 2018 and 2019)



Source: SMR01 and SMR04 records combined.

[†] The chart shows the five most common drug types. For an explanation of the drug types referred to, see [Glossary](#).

^p Provisional.

In April 2020, the number of sedative/hypnotic related hospital stays was 19% lower than the two-year average - the smallest COVID-19 related decrease of the drugs examined here. Apart from in October 2020, throughout the period from May 2020 to April 2021, the number of sedative/hypnotic-related hospital stays per month was considerably higher (8% to 45%) than the two-year average (Figure 2.4). Between May and October 2021, the number of sedative/hypnotic-related stays remained higher but were closer to the two-year average. From November 2021 onwards, sedative/hypnotic-related stays were generally lower than the two-year average (32% lower in March 2022).

In April 2020, the number of cannabinoid-related stays was 26% lower than the two-year average for the same month. Between May 2020 and March 2022, the number

of stays were generally higher than the two-year average for each month. Periods of higher differences coincided with lockdowns and restrictions: during these periods rates were on average 30% higher, compared to an average of 6% in periods without restrictions

In April 2020, cocaine-related hospital stays were 25% lower compared to the two-year average. Numbers of stays again tended to be higher than the respective monthly average of 2018 and 2019 during periods where restrictions were in place in Scotland but were lower than the monthly averages during periods where no restrictions were in place.

Hospital stays attributed to multiple/other drugs were 37% lower than the two-year average in April 2020. They remained below the two-year average until July 2020 and ranged between 17% higher and 9% lower than the two-year average until September 2021. Between October 2021 and March 2022, hospital stays attributed to multiple/other drug categories were between 10% and 24% below the two-year average.

Age group

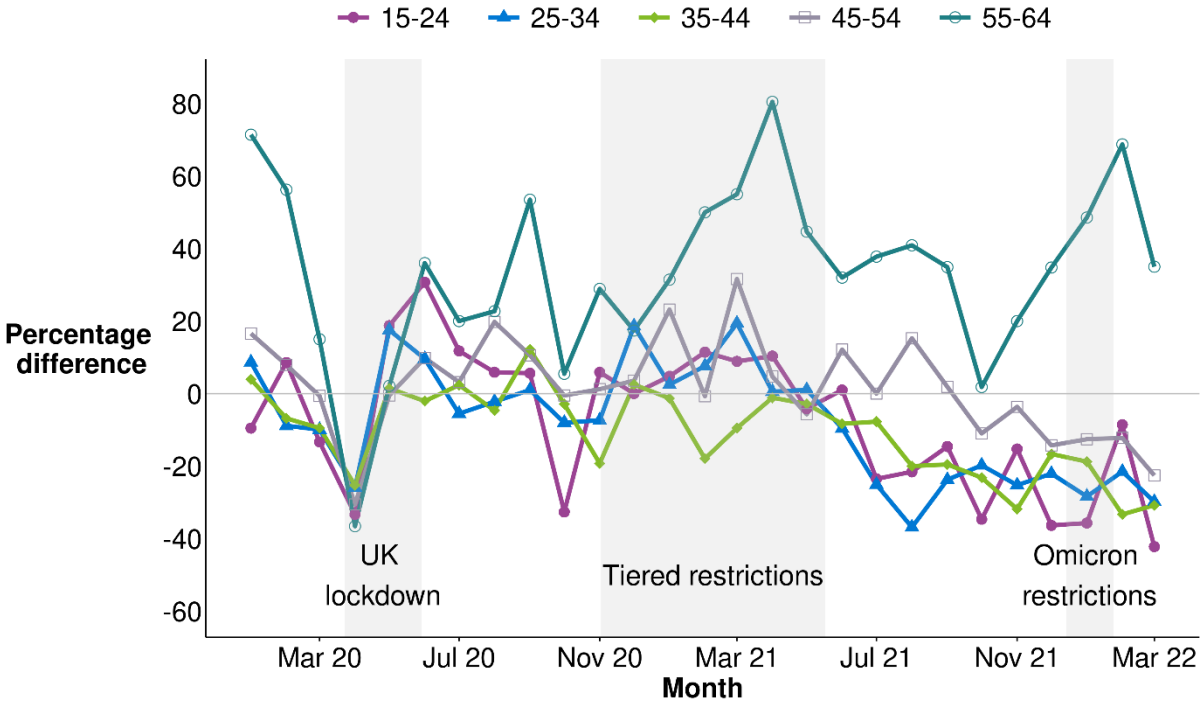
The percentage difference in the number of drug-related hospital stays by age group is shown in Figure 2.5. Due to the small number of stays per month, comparisons for the under 15 year and over 65-year age groups are not shown. In April 2020, there was a clear decrease in drug-related hospital stays for all other age groups, with the number of stays between 26% and 37% lower compared with the 2018 and 2019 average for the same month.

For almost all groups, two key patterns were observed over the time series:

- From May 2020 to June 2021, in spite of month-to-month variation, numbers of drug-related hospital stays were broadly similar to the two-year average.
- From July 2021 to March 2022, the number of hospital stays tended to be lower than the two-year average.

The exception to this was the 55-64 age group, where stays were higher than the two-year average for every month from May 2020 onwards. (Range: 2% - 80% higher, average percentage increase: 34%).

Figure 2.5: Percentage difference in the number of drug-related general acute/psychiatric hospital stays[†], by month and age group[‡] (Scotland; January 2020 to March 2022^p, relative to the average of 2018 and 2019)



Source: SMR01 and SMR04 records combined.

† See **Glossary** for definitions of stays, patients and new patients.
 ‡ The chart shows the five most common age types. Due to small numbers under 15s and over 65 age groups are not included.
 p Provisional.

Conclusion

The interruption of the long-term increasing trend in numbers and rates of drug-related hospital stays in 2020/21 appears to have coincided with the COVID-19 lockdowns and associated restrictions. However, the continuing decreasing trend observed in 2021/22 may be suggestive of a new trend in drug-related hospital stays.

The scope of this publication does not extend to explore potential causes, however planned future work may provide insights.

3. Overdose

This section focuses on hospital stays where a drug poisoning/overdose diagnosis was recorded as part of a hospital stay. Drug overdoses that are treated by the Scottish Ambulance Service or in Emergency Departments and do not result in an acute hospital admission are not included. Therefore, while the data included in this section provide important information on the characteristics of hospital stays associated with drug overdose, they do not provide an accurate count of the total number of drug overdoses occurring in Scotland each year.

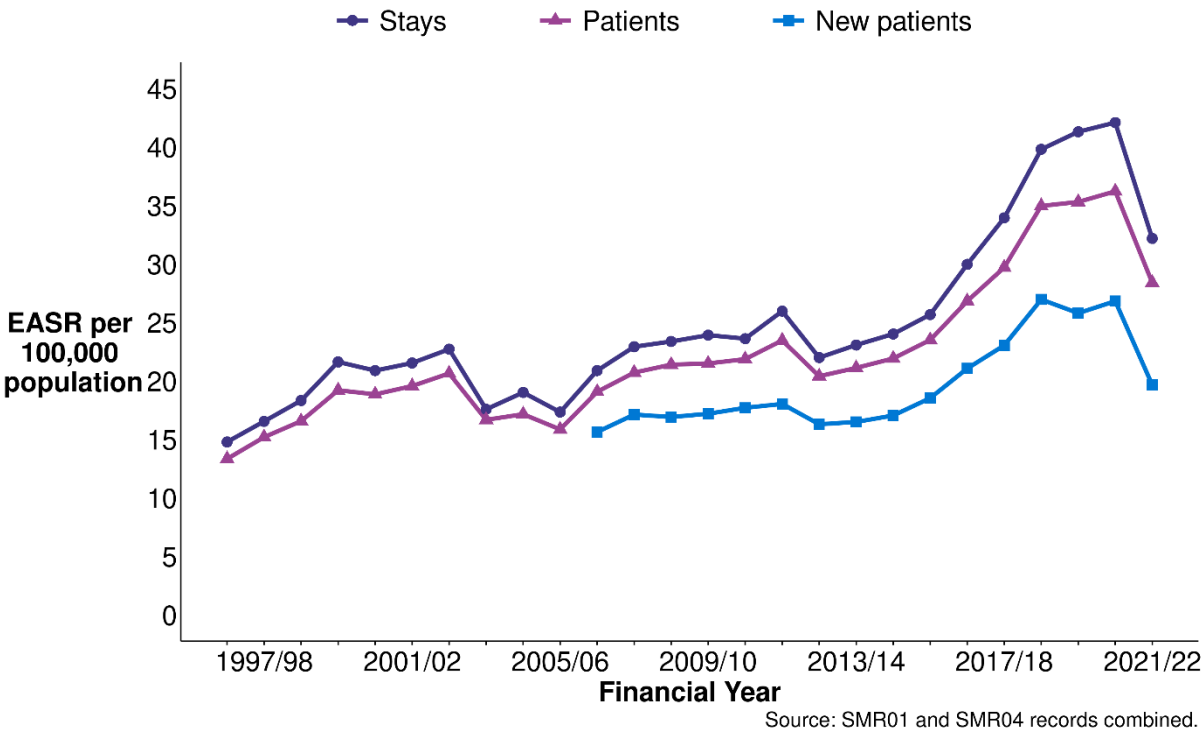
Although very few drug-related psychiatric hospital stays were associated with drug overdose (less than 0.7% in 2021/22), all figures discussed in this section refer to combined general acute and psychiatric stays.

In 2021/22 the restrictions on the required combinations of ICD 10 codes used to identify drug poisoning/overdose hospital stays were expanded. The overall numbers of stays classified as drug poisoning/overdose were not affected, but selected categories of drugs implicated in the stay have increased. Further detail is available in [Appendix 1](#). The definition has been retrospectively applied to previous years' data and will therefore differ to previous publications.

Trends in overdose stays

The drug-related overdose stay rate ranged between 17 and 26 per 100,000 population in the period from 1997/98 to 2015/16. Then, between 2016/17 and 2020/21, drug-related overdose rates increased from 30 to 42 stays per 100,000 population, before decreasing sharply to 32 stays per 100,000 population in 2021/22 (Figure 3.1).

Figure 3.1: Drug-related combined hospital rates for overdoses^{†‡} (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 p Provisional.

A person may have more than one overdose-related hospital stay within a financial year. In 2021/22, there were 1,722 overdose-related hospital stays among 1,515 patients. In 2021/22, the overdose patient rate was 28 per 100,000 population. Changes in the patient rate closely corresponded with changes in the stay rate, increasing substantially from 2015/16 onwards and decreasing sharply in 2021/22 (Figure 2.1).

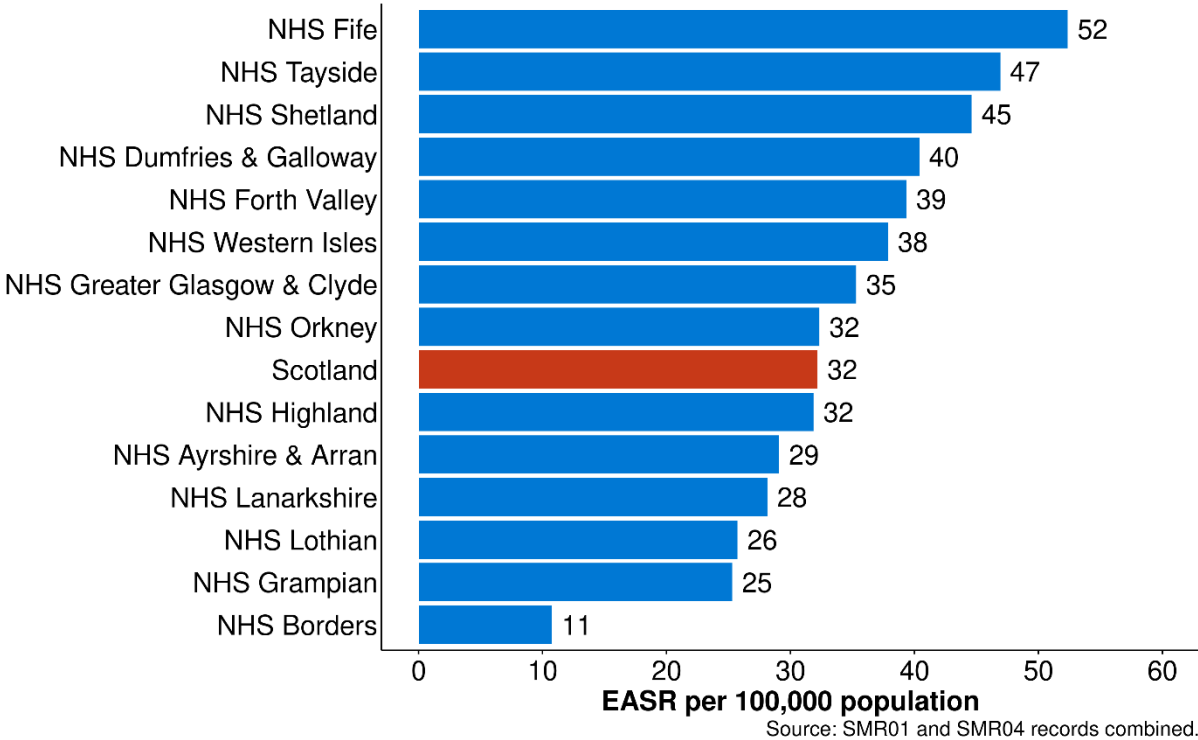
Patients were classed as ‘new’ patients if they had not had a similar drug-related stay in hospital within the previous ten years. In 2021/22, the new patient rate for overdoses was 20 new patients per 100,000 population. The overdose-related new patient rate varied little from 2006/07 to 2014/15 (consistently in the range of between 16 and 18 new patients per 100,000 population) but increased markedly to a range of 21 to 27 new patients per 100,000 population between 2018/19 and

2020/21. In 2021/22, the rate decreased sharply to 20 new patients per 100,000 population (Figure 3.1).

Geography

Figure 3.2 shows overdose stay rates by NHS Board. In 2021/22, the highest overdose stay rates among mainland NHS Boards were seen in NHS Fife (52 stays per 100,000 population), NHS Tayside (47) and NHS Dumfries & Galloway (40). Among mainland NHS Boards, the lowest rate was observed in NHS Borders (11). Variations between NHS Boards may reflect differences in hospital admission policies or diagnostic coding practices.

Figure 3.2: Drug-related general acute/psychiatric combined stay[†] overdose rates[‡], by NHS Board of Residence (Scotland; 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 p Provisional.

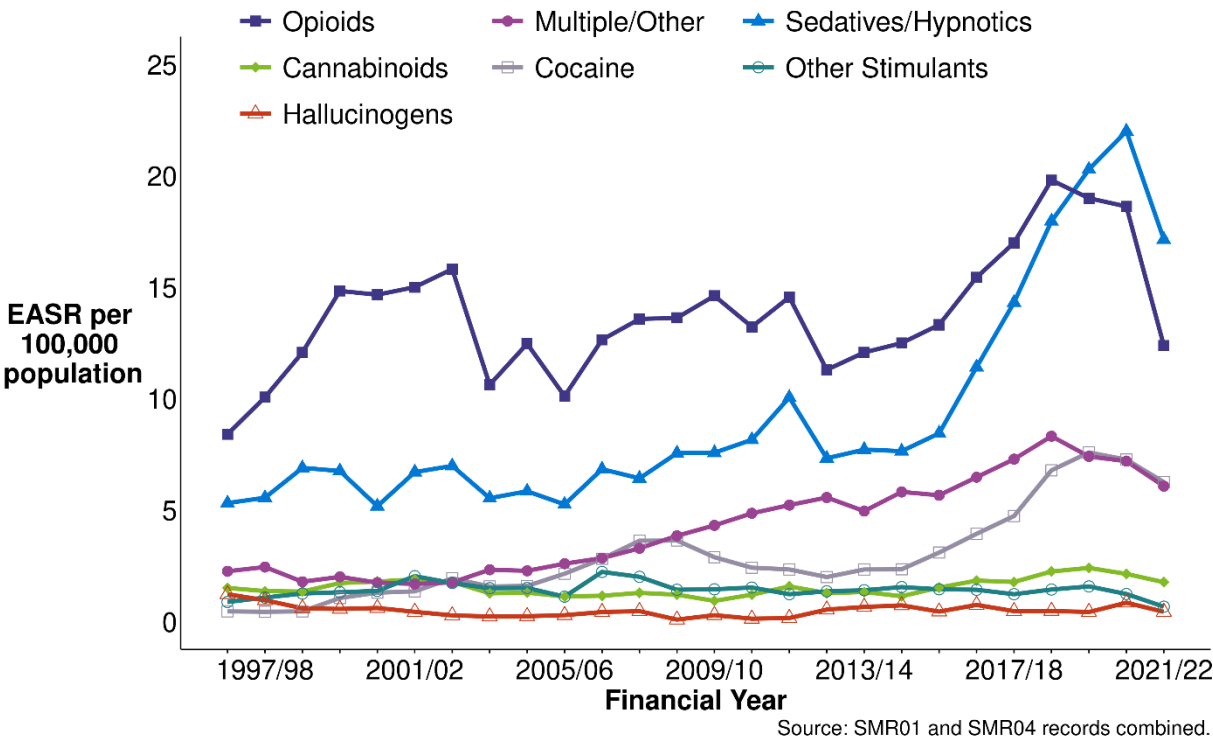
Drug type

Prior to 2016/17, the sedative/hypnotic overdose stay rate fluctuated between 5 and 8 stays per 100,000 population. Between 2016/17 and 2020/21, the rate doubled from 11 to 22 stays per 100,000 population, before decreasing to 17 in 2021/22. Despite this decrease, sedatives/hypnotics remained the most commonly reported drugs associated with overdose stays (Figure 3.3)

In 2021/22, the rate of opioid-related overdose stays was 12 per 100,000 population, which was a sharp decrease compared to the period from 2018/19 to 2020/21 (19-20 stays per 100,000 population). The percentage of overdose stays attributed to opioids decreased from a peak of 70% (846) in 2002/03 to 38% (660) in 2021/22 (Figure 3.3).

In 2021/22, the cocaine overdose stay rate (6 stays per 100,000 population) decreased slightly from 2019/20 and 2020/21 (8 and 7 stays per population respectively). Prior to this, the cocaine overdose rate had increased sharply from 2 stays per 100,000 population in 2014/15 to 8 stays per 100,000 population in 2019/20 (Figure 3.3).

Figure 3.3: Drug-related general acute/psychiatric combined stay[†] overdose rates[‡], by drug type* (Scotland; 1996/97 to 2021/22^p)

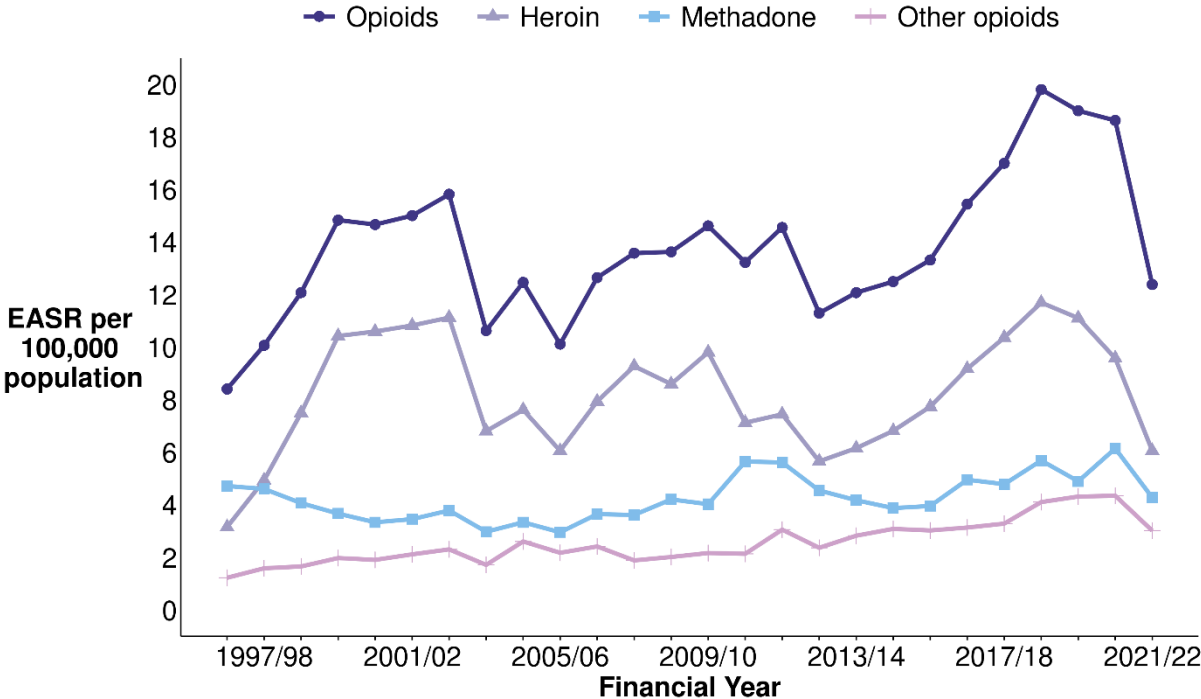


† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 * For an explanation of the drug types referred to, see **Glossary**.
 p Provisional.

Of the 660 opioid overdose stays observed in 2021/22, almost half (49%; 321) were associated with heroin. Changes in the rate of opioid overdose stays were strongly related to trends in heroin overdose stays, which increased steadily from 6 to 12 stays per 100,000 population between 2012/13 and 2018/19, before decreasing to 10 stays per 100,000 population in 2020/21, and 6 in 2021/22.

In 2021/22, the rate of opioid overdose stays associated with methadone was 4 per 100,000 population. Since 1997/98, the rate of methadone overdose stays has fluctuated between 3 and 6 stays per 100,000 population (Figure 3.4). The diagnostic coding scheme used for this publication (ICD-10) does not include a code for overdoses associated with other opioid substitution therapy drugs (such as buprenorphine). Any overdoses associated with these drugs will be captured in the 'Other opioid' category.

Figure 3.4: Opioid-related general acute/psychiatric combined stay[†] overdose rates[‡], by opioid type* (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 * The ‘All Opioids’ drugs category includes heroin, methadone, and all other opioid drug categories. The ‘other opioid’ category refers to opium, synthetic narcotics, and other opioids (including buprenorphine). For an explanation of the drug types referred to see **Glossary**.
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Demographics of overdose stays

As with patient rates for all drug-related hospital stays, trends in drug overdose patient rates provided clear evidence of an ageing patient profile^{vi}.

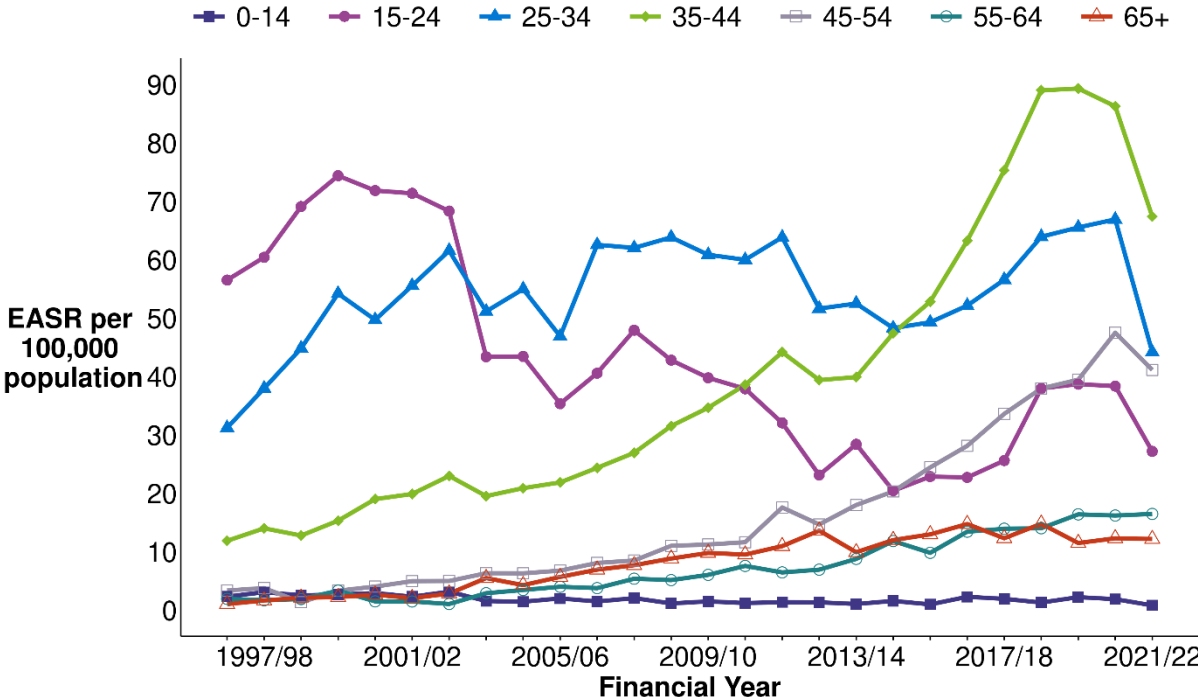
^{vi} **Older People with Drug Problems in Scotland: Addressing the Needs of an Ageing Population**’ (Scottish Drugs Forum, 2017)

From 1997/98 to 2019/20, there was an upward trend in patient rates among those aged 35-44 years (rising from 14 to 89 patients per 100,000 population). Though there was a decrease in 2020/21 and 2021/22 to 87 and 67 patients per 100,000 population respectively, the 35-44 age group remained the most common age group with an overdose-related hospital stay in 2021/22.

An upward trend in overdose patient rates was observed among 45–54-year-olds from 1997/98 to 2020/21 (increasing from 4 to 47 patients per 100,000 population), before a decrease to 41 patients per 100,000 population in 2021/22. Overdose patient rates among those aged 55-64 years also increased from 2002/03 (1 patient per 100,000 population) onwards and continued to rise in 2021/22 (16 patients per 100,000 population) (Figure 3.5).

For the 25-34-year age group, rates fluctuated between 47 and 67 patients per 100,000 population in the period from 1999/00 to 2020/21, before falling to 44 in 2021/22. For 15-24-year-olds, a steady decrease from 1999/00 (74 patients per 100,000 population) to 2014/15 (20) was followed by a series of increases to 38 patients per 100,000 population in 2018/19. Overdose patient rates among this group decreased sharply to 27 in 2021/22.

Figure 3.5: Drug-related general acute/psychiatric patient[†] overdose rates[‡], by age group (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 p Provisional.

Other demographic features observed among overdose patients were:

- In 2020/21, just under two thirds (64%) of patients who had a drug-related hospital stay for overdose were males (975 males and 540 females). There was a sharp rise in the male overdose patient rate from 31 per 100,000 in 2015/16 to 49 per 100,000 in 2020/21, falling to 37 in 2021/22.
- Patients from more deprived areas were more likely to experience an overdose-related hospital stay. In each year in the time series, just under half of patients with an overdose-related hospital stay lived in the 20% most deprived areas in Scotland (deprivation quintile 1: 46% in 2021/22). Overdose patient rates decreased in line with deprivation. The overdose patient rate in the most deprived quintile was 67 per 100,000 population compared to 42 in

the second most deprived quintile, 14 in the third most deprived quintile, 8 in the fourth most deprived, and 4 in the least deprived.

Conclusion

In 2021/22, rates of drug poisoning/overdose stays and patients decreased for the first time since 2012/13.

For the third consecutive year, the most common drugs associated with stays for drug poisoning/overdoses were sedatives/hypnotics, followed by opioids. There were decreases in stay rates across all drug types in 2021/22. The potential causes of this decline are beyond the scope of this publication, however planned future work may provide insights.

Trends in rates of stays by age group, sex and deprivation reflected the overall trends for 2021/22 in **Section 1**.

4. Drug-related hospital stays in younger and older people

Rates of stays for patients aged less than 45 years have decreased substantially in two consecutive years (see Section 1), while rates of stays for patients aged 45 years and older have either had very minor decreases (ages 45-54), or increased (55-64 and 65 and older) over the same time period. This section describes stays among patients in these age groups and explores differences in their characteristics (hospital type, diagnosis, characteristics of stays, and drugs implicated). Please note, due to the age groups presented, some of the figures reported in this section are not readily available in the [dashboard](#).

Stays, Patients, New patients

In people aged 0 to 44 years:

- 65% (8,136 of 12,474) of drug-related hospital stays in 2021/22 were among people aged 0-44 years. Approximately half (49%) of these stays (3,975 of 8,139) were among patients aged 35-44 years.
- 65% (5,973) of the 9,198 patients admitted in 2021/22 were aged less than 45 years. This has decreased from a peak of 94% of patients in 2002/03.
- Approximately half (49%, 2,931) of patients aged 0-44 years were 'new' patients. The percentage of patients aged less than 45 years categorised as 'new' patients has been relatively stable over time (ranging between 49% and 54% in each year since 2006/07).

In people aged 45 years and older:

- 35% percent (4,335) of drug-related hospital stays in 2021/22 were among people aged 45 years and older. People aged 45-54 years made up 68% (2,937 of 4,335) of these stays in 2021/22.
- 35% (3,225) of the 9,198 patients admitted in 2021/22 were aged 45 years and older. This has been steadily increasing from 5% of patients in 1998/98.

- 44% (1,434) of patients in this age group were identified as new patients in 2021/22. This percentage has steadily decreased from 66% in 2006/07.

Hospital type

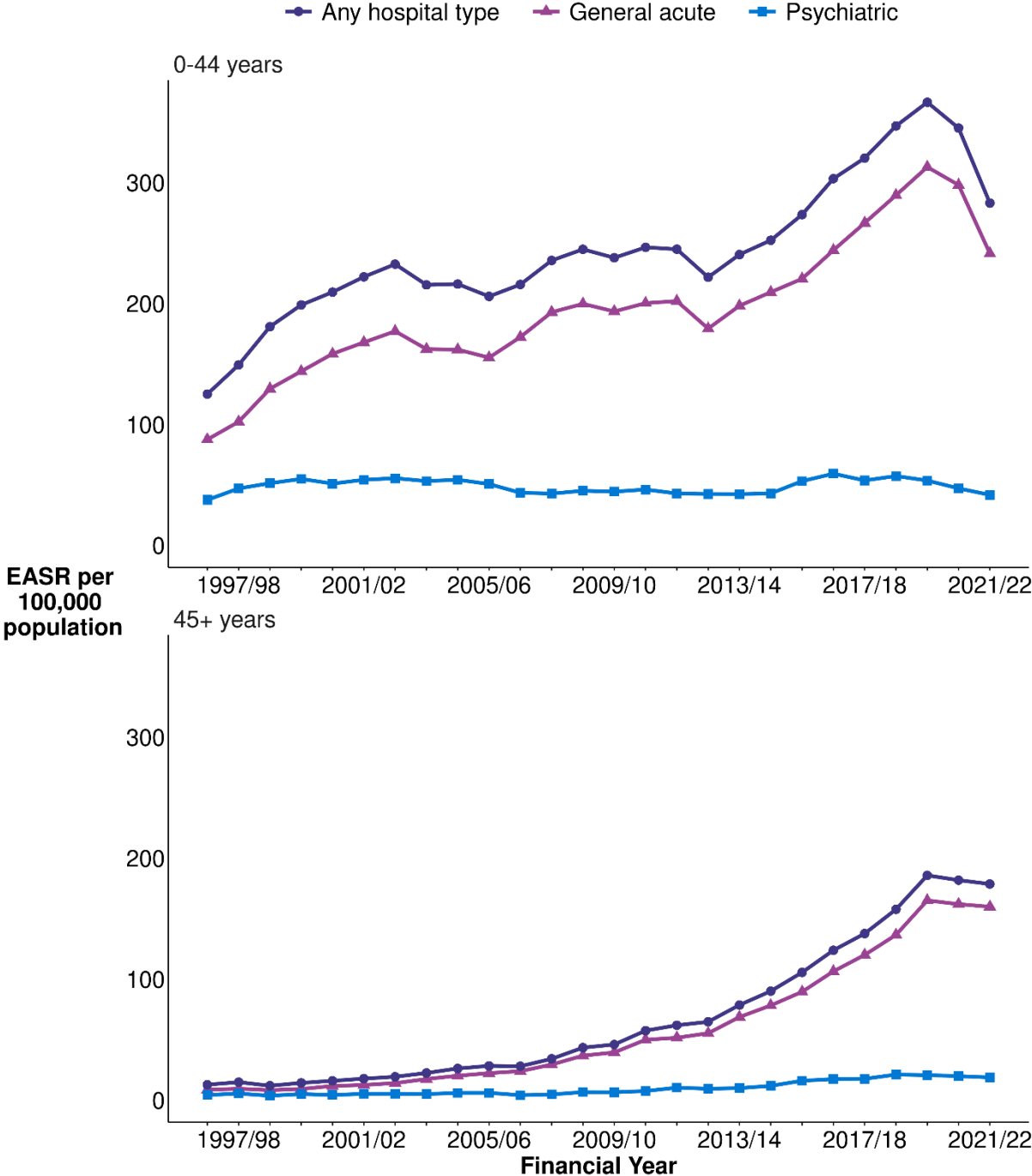
In 2021/22, of the 8,136 drug-related stays for people aged under 45 years, 85% (6,921) and 15% (1,215) were in general acute and psychiatric hospitals respectively.

- Rates of drug-related stays in general acute hospitals increased inconsistently between 2000/01 and 2011/12, before sharply increasing until 2019/20 (179 to 313 stays per 100,000 population). Since 2019/20, rates of stays for people aged less than 45 years have decreased (2020/21: 298, 2021/22: 241). (Figure 4.1).
- Rates of stays in psychiatric hospitals ranged between 42 and 60 stays per 100,000 over the time series.

Of the 4,335 drug related stays among people aged 45 years and over, 90% (3,882) were in general acute hospitals, and 10% (453) were in psychiatric hospitals.

- The rate of drug-related stays in general acute hospitals increased steadily between 1997/98 (8 stays per 100,000) and 2019/20 (165), with small decreases to 160 stays per 100,000 by 2021/22.
- Rates of drug-related stays in psychiatric hospitals increased from 4 stays in 1998/99 to 19 stays in 2021/22.

Figure 4.1: Drug-related general acute/psychiatric combined stay rates[†] by age group and hospital type[‡] (Scotland; 1996/97 to 2021/22^p)



† Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.

‡ See **Glossary** for definitions of stays, patients and new patients.

p Provisional.

Diagnosis type

In 2021/22, hospital stays among people aged under 45 years comprised:

- Mental & Behavioural: 94% (7,623) of drug-related stays included a mental & behavioural diagnosis. Rates of these stays increased by 60% between 2012/13 and 2019/20 (205 to 265 stays per 100,000 population).
- Overdose: 14% (1,122) of stays included a drug-poisoning/overdose diagnosis. Rates of stays due to drug poisoning/overdose increased from 29 to 55 stays per 100,000 population over the time series, decreasing to 39 in 2021/22.
- 7% (606) of the people had both mental and behavioural and overdose codes recorded within the same stay.

Among people aged 45 years and older:

- Mental & Behavioural: 92% (3,972) of drug-related stays among people aged 45 years and older age groups included a mental & behavioural diagnosis. Rates of stays increased from 54 to 171 stays per 100,000 between 2012/13 and 2019/20. decreasing to 164 in 2021/22.
- Overdose: 14% (600) of stays included a drug-poisoning/overdose diagnosis. Rates of stays increased from 2 per 100,000 population in 1997/98 to a peak of 27 in 2020/21. Rates for 2021/22 decreased slightly to 24 stays.
- 6% (237) of stays included both diagnoses.

The percentage breakdown across the diagnosis types were approximately equal to that of the general population (mental & behavioural; 93%: overdose: 14%, both: 7% - see section on **Overall trends**).

Characteristics of stays

In people aged less than 45 years:

- In 2021/22, 54% of the 8,136 stays lasted one day or less, and 18% of stays lasted at least one week. The median length of stay was 1 day.
- 95% (7,710) of all hospital stays in 2021/22 were emergency admissions. This has increased from 84% in 1997/98.

In people aged 45 years and older:

- Stays for people aged 45 years and older tended to be longer, with 41% of stays lasting one day or less, and 27% lasting at least a week. The median length of stay has been slowly decreasing, from 7 days in 1998/99 to 2 days in 2021/22.
- 93% (4,008) of all hospital stays were via emergency admission, increasing from 70% in 1997/98.

Drug type

In people aged less than 45 years old:

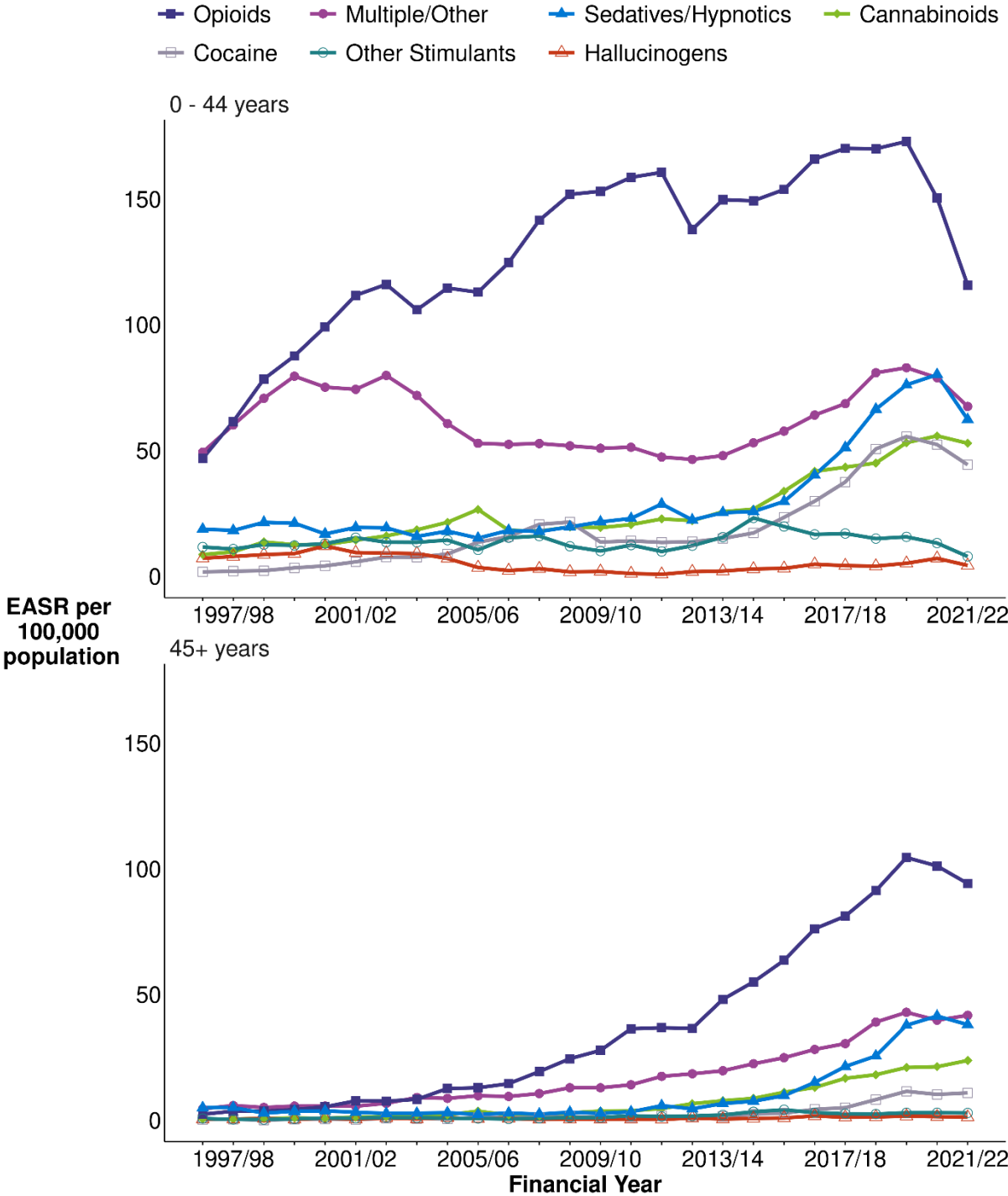
- Opioids continued to be the drug most commonly associated with hospital stays, however there has been a sharp decrease in rates, from 173 stays per 100,000 population in 2019/20 to 116 in 2021/22. (Figure 4.2). Despite making up 40% of stays for this age group, opioid stay rates in 2021/22 were the lowest seen since 2005/06 (113).
- The second most common drug category in hospital stays was 'multiple/other' drugs. Rates of stays for this category peaked at 80 stays per 100,000 population in 1999/00 and 2002/03, before decreasing to a period of relative stability with rates averaging at 50 stays. Since 2012/13, rates of stays had increased to a peak of 83 by 2019/20 but were followed by two consecutive years of decline to 67 stays.

- Rates of stays involving sedatives/hypnotic drugs, cannabinoids and cocaine had seen sharp increases since 2013/14, with sedative/hypnotics peaking at 80 stays per 100,000 in 2020/21, before decreasing to 62 stays in 2021/22. Rates of stays for cannabinoids and cocaine peaked at 55 stays per 100,000 population and had decreased to 53 (cannabinoids) and 44 (cocaine) in 2021/22.
- Rates of stays involving 'other stimulants' generally ranged between 10 and 15 stays each year of the time series. 2021/22 was the lowest rate seen yet - 8 stays per 100,000.
- Rates of stays involving hallucinogens ranged between 3 and 7 stays per 100,000 over the time series.

In people aged 45 years and older:

- Opioids were the most commonly recorded drug associated with hospital stays in 2021/22 (52% of all stays). Rates of stays for opioids increased steadily over the time series, peaking at 104 stays per 100,000 population in 2019/20, before decreasing slightly to 94 stays in 2021/22 (Figure 4.2).
- Rates of stays involving 'multiple/other' drugs steadily increased over the time series, rising from 6 in 1997/98 to between 39 and 43 stays per 100,000 in the years since 2018/19.
- Sedatives/hypnotics stay rates increased from 7 to 41 per 100,000 population between 2014/15 and 2020/21, before decreasing slightly to 38 in 2021/22.
- In 2021/22, there were small increases in rates of stays involving cannabinoids and cocaine - the only two drug types to have increased in the last year. Cannabinoids continued their long-term increasing trend, from 21 to 24 stays, while rates of cocaine-related stays increased from 10 to 11.
- Rates of stays for hallucinogens and 'other stimulants' remained constant, at 1 and 3 stays per 100,000 respectively.

Figure 4.2: Drug-related general acute/psychiatric combined stay† rates‡ by age group and drug type* (Scotland; 1996/97 to 2021/22^p)



Source: SMR01 and SMR04 records combined.

† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 * For an explanation of the drug types referred to, see **Glossary**.
 p Provisional.

Conclusion

There were few differences between the under 45 years and 45 years and over drug-related patient age groups in relation to hospital type, diagnosis type or percentage of emergency admissions.

Differences were observed in relation to:

- The increasing number and percentage of people admitted to hospital with a drug-related event who were aged 45 years or over. This was also reflected in the median age of patients, which increased from 27 to 40 years over the time series from 1997/98 to 2021/22.
- The percentage of 'new' patients in the older age group was 66% in 2006/07 and has decreased to 45% over time. This indicates that the older age group increasingly comprises patients who have had other drug-related hospital admissions in the past ten years. Strengthening pathways between acute care and drug treatment services may be valuable for reducing harms among this group.
- On average, patients in the older age group stayed in hospital for longer than younger patients. Considered alongside the increase in the number of older patients with drug-related hospital admissions and the higher percentage of repeat admissions among this patient group, this suggests that enhanced community support following hospital discharge may be beneficial for older patients.
- In recent years, trends in drug types associated with hospital stays between the groups have increasingly diverged. Sharp decreases were recorded across a number of substance-specific stay rates for the younger age group. In contrast, stay rates decreased slightly or, in a few cases, increased among the older age group. These differences were most apparent in relation to opioids, the most common drug type associated with hospital admissions among both groups.

These differences are strongly suggestive of an ageing effect within the population of people who use drugs problematically^{vii}. Older drug-related patients were more likely to be admitted to hospital again for similar reasons and more likely to stay in hospital for longer. The findings also suggest an overall reduction in the number of patients suffering acute drug-related harms and decreasing observations of acute drug-related harms associated with opioid use among younger people. The scope of this publication does not extend to explore potential causes for these changes, however longitudinal analysis of drug-related patient pathways may provide valuable insights.

vii **‘Older People with Drug Problems in Scotland: Addressing the Needs of an Ageing Population’** (Scottish Drugs Forum, 2017).

Glossary

ADP

Alcohol and Drug Partnership (ADP) describes which of the 31 ADP areas the patient lives in, based on the postcode of their home address. ADPs are multi-agency partnerships established by the Scottish Government to deliver a co-ordinated approach to alcohol and drug related work in all local areas. This work is based on a partnership approach involving the statutory, voluntary and private sectors, and engaging the wider community. For more information about ADPs go to the [Scottish Government website](#).

Cannabinoids

Drugs related to cannabis. The cannabis plant contains various cannabinoids. The primary psychoactive compound in cannabis is the cannabinoid tetrahydrocannabinol (THC). In addition to natural cannabinoids (for example, THC), this group of drugs includes synthetic (artificial) cannabinoids which are the psychoactive compounds in designer drugs with names like 'Spice'. Cannabidiol (also known as CBD) is another cannabinoid which is recognised within this group of drugs. Many CBD preparations available in the UK (for example, cannabis oil) do not contain THC and therefore do not have a psychoactive effect. Other preparations with a higher THC concentration may produce a strong psychoactive effect. Use of cannabinoids can lead to a state of relaxation, euphoria, introspection, anxiety, paranoia, increase in heart rate and hunger. Synthetic cannabinoids have also been associated with seizures, difficulties breathing and death.

Cocaine	<p>A strong stimulant which is commonly snorted, inhaled as smoke, or dissolved and injected into a vein. This group includes powder cocaine and crack cocaine. The effects of cocaine may include loss of contact with reality, an intense feeling of happiness, or agitation, a fast heart rate, sweating and large pupils. High doses can result in very high blood pressure or body temperature. After a short period of use, there is a high risk that dependence will occur. Its use is associated with stroke, heart attack, lung problems, blood infections, and sudden cardiac death.</p>
Day case	<p>A patient who has a planned admission to a specialty for clinical care. The patient is not expected to, and does not, remain overnight.</p>
Deprivation	<p>If an area is identified as deprived, this can relate to the fact that the people who live there have a low income, it can also mean that there are fewer resources and opportunities in that area. The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across small areas in Scotland, called data zones. A data zone is a small geographical area with up to 1,000 residents. SIMD has over 30 indicators in 7 domains (income, employment, education, health, housing, geographical access to services and crime) at data zone level, which have been combined into an overall index. Rates are reported by quintiles (see quintile). SIMD is updated roughly every three years and the version used depends on the year when the patient was discharged from hospital. More information can be found on the PHS SIMD webpage and in the Deprivation section in Methods.</p>

Diagnosis grouping	Diagnosis grouping is broken down into: Mental & Behavioural, Overdose, and Any diagnosis (a combination of Mental & Behavioural and Overdose). Each of these groups is based on ICD10 diagnostic codes. See Analytical definitions section in Methods for further details.
Discharge	The end of a period of health care in a hospital setting. Each period of health care begins with a referral or admission and is ended by a discharge.
EASR	European Age-sex Standardised Rate (EASR) – the rate that would have been found if the population in Scotland had the same age and sex composition as the hypothetical standard European population. See EASR section in Methods for further details.
Hallucinogens	Hallucinogens are a group of drugs that alter perception of surroundings, including visual and auditory effects and changes to consciousness and emotion. These substances may be synthetic, for example LSD (lysergic acid diethylamide) or naturally occurring, for example psilocybin (the active ingredient found in ‘magic mushrooms’). Most hallucinogens are not known to have long-term physical toxicity or risk of dependence, however, long term use may lead to psychological harm or exacerbation of existing mental health conditions. Unintentional injury as a result of behavioural changes due to the effects of a hallucinogenic substance is also a risk.
Heroin	See Opioids.
ICD	The International Statistical Classification of Diseases and Related Health Problems (ICD) is used to record diagnoses following hospital discharge, including deaths. The 10th revision is used in the analysis in this publication.

Inpatient	A patient who occupies an available staffed bed in a hospital. This includes patients who remain overnight (whatever the original intention) or who are expected to remain overnight but are discharged earlier.
Methadone	See Opioids.
‘Multiple/other’ drug type	The ‘multiple/other’ drugs category includes volatile solvents (such as glue, gases or aerosols), multiple drug use and use of other psychoactive substances (for example, ecstasy). This category may also be used to indicate multiple drug use when individual substances are not known or cannot be coded using existing diagnosis (ICD10) codes.
New patient	A person admitted to hospital as an inpatient or day case patient within a given time period (for example, a financial year), who has not had a similar drug-related stay in hospital within the previous ten years.
NHS Board	One of 14 Scottish territorial NHS Boards in which the patient lives, based on the postcode of their home address. People who are resident outside Scotland are included in a separate category labelled 'Outside Scotland'. Those with no fixed abode or unknown are placed in the category ‘Other/Not Known’.

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 methadone, 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. Frequent, escalating use of opioids typically results in dependence. Tolerance develops with continuous use, requiring increasing doses and leading to a withdrawal syndrome upon stopping suddenly. Accidental overdose or use alongside other depressant drugs commonly results in death from respiratory depression.
Other stimulants	The ‘other stimulant’ category includes stimulants other than cocaine (such as caffeine, amphetamine, methamphetamine, BZP, PMA). See the FRANK website for more information about specific substances.
Patient	A person admitted to hospital as an inpatient or day case patient within a given time period (for example, a financial year).
Provisional data	Submissions of data from hospitals are not yet complete. When all submissions have been received, the final figure may be different to that reported at the time of publication.
Quintile	A fifth of the Scottish population, as defined by the SIMD (see Deprivation above). The five groups of data zones range from the most deprived (1) to the least deprived (5).

**Sedatives/
hypnotics**

Drugs that induce sedation by reducing irritability or excitement. This group of drugs includes 'prescribable' benzodiazepines (drugs such as diazepam), 'street' benzodiazepines (for example, etizolam and alprazolam) and z-hypnotics (for example, 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

A period of health care in a hospital setting known as a continuous inpatient stay (CIS). A CIS is made up of individual episodes (where the patient is under the care of an individual consultant). A patient may have a number of stays during a given reporting period. Each stay begins with a referral or admission and is ended by a discharge.

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Further information

Further information and data for this publication are available from the [publication page](#) on our website.

The next release of this publication will be November 2023.

Open data

Data from this publication is available to download from the [Scottish Health and Social Care Open Data Portal](#).

Rate this publication

Let us know what you think about this publication via the link at the bottom of this [publication page](#) on the PHS website.

Appendices

Appendix 1 – Background information

This report presents 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.

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.

Information is provided for financial years 1996/97 to 2021/22.

The following differences in the time periods used should be noted:

- Time trends for ‘new patients’ start from 2006/07. Before 1996/97, diagnosis coding within SMR01 and SMR04 records was based on International Classification of Diseases 9th Revision (ICD9). ISD introduced International Classification of Diseases 10th Revision (ICD10) coding into SMR from 1996 onwards. The coding of drug use diagnoses changed markedly between these two ICD versions. As the identification of ‘new patients’ 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.
- Alcohol and Drug Partnerships (ADPs) were established in 1997. Therefore, time trends for ‘ADP of residence’ locations start from 1997/98.

In autumn 2018, Public Health Scotland (PHS) (previously Information Services Division (ISD)) conducted a **customer consultation** in relation to a proposed change to include stays due to drug poisoning/overdose in the definition of a drug-related hospital stay. Responses to this consultation indicated that users agreed with the proposed change. Therefore, the revised definition was implemented and came into

effect for the **Drug-Related Hospital Statistics** report, published on 28 May 2019. A full report describing the results of the consultation is available [here](#).

In January 2020, PHS conducted a further customer consultation in relation to: Drug-Related Hospital Statistics dashboard usability; data visualisation; dashboard content; and the Drug-Related Hospital Statistics publication report. Responses to this consultation indicated that users were broadly supportive of the dashboard and its features but suggested some improvements, many of which are implemented in the release of these statistics on 27 October 2020. A full report describing the results of this consultation is available [here](#).

Following the above-mentioned consultations, the definition of drug poison/overdose stays comprised selected 'T' codes from the ICD 10 chapter of Injury, Poisoning and certain other consequences of external causes. Eight of these codes could be used to identify a drug poisoning/overdose stay alone, and six further codes required any of the mental and behavioural diagnosis codes ('F' codes) in addition to be considered a relevant stay (See Table A.1). As part of our continuous process of review and quality improvement, a logical inconsistency was identified in this approach. Following consultation with clinical colleagues, a minor change to the definition was made, allowing either an F code, or one of the eight main T codes.

Table A.1 Amendments to the drug poisoning/overdose definition

Drug type	Existing	Revised
Opioid	T40.0 T40.1 T40.3 T40.2 + F ^a T40.4 + F ^a	T40.0 T40.1 T40.3 T40.2 + F or T ^b T40.4 + F or T ^b
Cocaine	T40.5	T40.5
Multiple/other	T40.6 T52 + F ^a	T40.6 T52 + F or T ^b
Cannabinoids	T40.7	T40.7
Hallucinogens	T40.8 T40.9	T40.8 T40.9

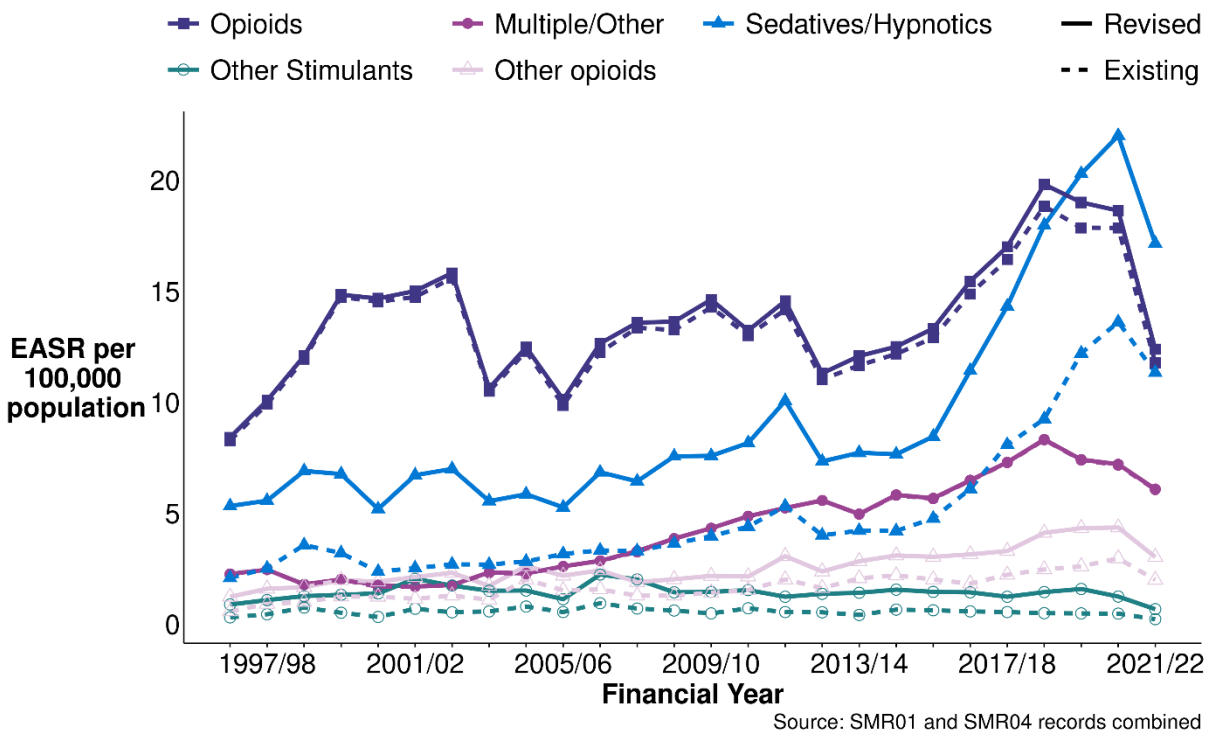
Drug type	Existing	Revised
Sedatives/hypnotics	T42.3 + F ^a T42.4 + F ^a	T42.3 + F or T ^b T42.4 + F or T ^b
Other stimulants	T43.6 + F ^a	T43.6 + F or T ^b

a. F: F11 to F16, F18 or F19

b. F or T: F11-F16, F18, F19, T40.0, T40.1, T40.3, T40.5, T40.6, T40.7, T40.8, T40.9

This change has not altered the number of overall stays but has resulted in increased numbers of stays and associated rates for selected drugs. For 2021/22, the rate of stays for other stimulant overdoses increased from 0.2 to 0.7 stays per 100,000 (205% increase), sedatives/hypnotic overdose rates increased from 11 to 17 (51%), other opioids increased from 2 to 3 stays (52%), and overdose rates of stays for multiple/other drugs had a negligible increase (approximately 6 stays per 100,000 population, a less than 1% increase) (Figure A.1). For rates of the combined diagnosis types (mental & behavioural and drug poisoning/overdoses), the impact was less obvious: rates of stays for sedatives/hypnotics increased from 45 to 51 stays per 100,000 population (13%), other stimulants increased from 5 to 5.5 stays (9%), and there were minor (<1%) increases in the opioid and multiple/other drugs categories.

Figure A.1 Drug-related general acute/psychiatric combined stay[†] overdose rates[‡], by drug type* and definition (Scotland; 1996/97 to 2021/22^p)



† See **Glossary** for definitions of stays, patients and new patients.
 ‡ Uses European Standard Population 2013 and National Records of Scotland 2021 mid-year population estimates.
 * For an explanation of the drug types referred to, see **Glossary**.
 p Provisional

Appendix 2 – COVID 19

On 1 March 2020, the first person in Scotland tested positive for COVID-19. On 17 March 2020, NHS Scotland was placed on an emergency footing by the Cabinet Secretary. Since the start of the outbreak, Public Health Scotland (PHS) has been working closely with Scottish Government and health and care colleagues to support the surveillance and monitoring of COVID-19 amongst the population. Numerous reports regarding COVID-19 are being regularly published (for example, **PHS weekly reports**, including **wider impacts analysis**; **Coronavirus in Scotland – Scottish Government**, and **Deaths involving coronavirus in Scotland – National Records of Scotland**).

During this pandemic, NHS Boards, hospitals, and healthcare providers have been required to change their normal ways of working to allow them to focus their efforts locally on their COVID-19 response. As such, this will have a direct impact on the volume of hospital activity and trends observed, for example reductions in numbers of hospital stays. This publication covers two financial years (2020/21 and 2021/22) during which Scotland initiated COVID-19 emergency measures. This includes nationwide lockdowns as well as various levels of local and national restrictions throughout this period. Health care services have continued to remain in a state of heightened alert.

Appendix 3 – Publication Metadata

Publication title

Drug-Related Hospital Statistics 2021/22

Description

Data relating to general acute and psychiatric hospital stays with a diagnosis of drug use. These data are presented at a national level and also broken down by demographic characteristics/local geographies.

Theme

Lifestyle and behaviours

Topic

Substance Use

Format

PDF report with online dashboard

Data source(s)

General acute inpatient/day case records (SMR01)

Mental health inpatient/day case records (SMR04)

Date that data are acquired

SMR01: 20 September 2022

SMR04: 20 September 2022

Release date

22 November 2022

Frequency

Annual

Timeframe of data and timeliness

General acute (SMR01) – information from the period 01/04/1996 to 31/03/2022.

Analysis based on the period 1996/97 to 2020/22.

Psychiatric (SMR04) –information from the period 01/04/1996 to 31/03/2022.
Analysis based on the period 1997/98 to 2020/22.

General acute & psychiatric combined (SMR01 & SMR04) – information from the period 01/04/1996 to 31/03/2022. Analysis based on the period 1997/98 to 2020/22.

Continuity of data

See [background information](#).

In previous reports, length of stay was calculated as being ‘less than one week’ and ‘one week or more’. As the majority of hospital stays within general acute hospitals are for less than one week it was felt useful to provide a more granular length of stay measure. For this publication the length of stay calculation has been changed, replacing ‘less than one week’ with individual categories related to the number of stays for zero, one, two, three, four, five and six days, as well as the number of stays for seven or more days. Please note that due to the disclosure control methods used in this release, the total number of stays of zero days to six days length will not be directly comparable to the number of stays reported as being for ‘less than one week’ in previous publications.

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

As part of our continuous process of review and quality improvement, a logical inconsistency was identified in the approach taken to identify drug poison/overdose stays. Following consultation with clinical colleagues, a minor change to the definition was made (See [Appendix 1](#) for detail).

Concepts and definitions

See [Glossary](#).

Also, refer to:

Hospital Care - Background Information:

<https://beta.isdscotland.org/topics/hospital-care/>

ScotPHO - Drug Use: <http://www.scotpho.org.uk/behaviour/drugs/introduction>

Relevance and key uses of the statistics

Relevant to understanding substance use in Scotland. Statistics will be used for policy making and service planning

Accuracy

Quality checks are conducted by Public Health Scotland (PHS). Figures are compared to previously published data and expected trends.

Completeness

Details of data submission issues are available on the [SMR completeness webpage](#).

Comparability

The NHS Digital 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.

Accessibility

It is the policy of Public Health Scotland to make its web sites and products accessible according to published guidelines. More information on accessibility can be found on the [PHS website](#).

Coherence and clarity

Data are presented within an interactive dashboard workbook. Notes have been added to ensure technical terms can be understood.

Value type and unit of measurement

Numbers, percentages and European Age-sex Standardised Rates per 100,000

Disclosure

The **PHS protocol on Statistical Disclosure Protocol** is followed to protect patient confidentiality.

Official Statistics designation

National Statistics

UK Statistics Authority Assessment

Completed assessment by UK Statistics Authority, report published 4 April 2012.

Last published

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Date of first publication

1998

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Appendix 4 – Early access details

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", PHS is 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

Early Access for Management Information

These statistics will also have been made available to those who needed access to 'management information', i.e. as part of the delivery of health and care.

Early Access for Quality Assurance

These statistics will also have been made available to those who needed access to help quality assure the publication.

Appendix 5 – PHS and Official Statistics

About Public Health Scotland (PHS)

PHS is a knowledge-based and intelligence driven organisation with a critical reliance on data and information to enable it to be an independent voice for the public's health, leading collaboratively and effectively across the Scottish public health system, accountable at local and national levels, and providing leadership and focus for achieving better health and wellbeing outcomes for the population. Our statistics comply with the **Code of Practice for Statistics** in terms of trustworthiness, high quality and public value. This also means that we keep data secure at all stages, through collection, processing, analysis and output production, and adhere to the **'five safes'**.