

Statistical bulletin

Deaths related to drug poisoning in England and Wales: 2021 registrations

Deaths related to drug poisoning in England and Wales from 1993 to 2021, by cause of death, sex, age and substances involved in the death.



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1 . Main points

- 4,859 deaths related to drug poisoning were registered in 2021 in England and Wales, equivalent to a rate of 84.4 deaths per million people; this is 6.2% higher than the rate recorded in 2020 (79.5 deaths per million).
- Among males, there were 115.1 drug poisoning deaths registered per million in 2021 (3,275 deaths), compared with 54.1 deaths per million among females (1,584 deaths).
- 3,060 drug poisoning deaths registered in 2021 were identified as drug misuse, accounting for 53.2 deaths per million people.
- Rates of drug misuse death continue to be elevated among those born in the 1970s, often referred to as “Generation X”, with the highest rate in those aged 45 to 49 years.
- Approximately half of all drug poisoning deaths registered in 2021 involved an opiate (45.7%; 2,219 deaths).
- 840 deaths involved cocaine, which is 8.1% more than 2020 and more than seven times the amount recorded a decade ago (112 deaths in 2011).
- The North East continues to have the highest rate of deaths relating to drug poisoning and drug misuse (163.4 deaths per million people and 104.1 per million, respectively); London had the lowest rate for drug poisonings (47.6 deaths per million people), and the East of England had the lowest rate for drug misuse (27.4 per million).

Statistics on drug-related deaths are based on the date of death registration – because of registration delays, around half of these deaths will have occurred in previous years.

2 . Drug poisonings in England and Wales

The rate of drug poisoning deaths continues to increase

4,859 deaths related to drug poisoning were registered in England and Wales in 2021; this is the highest number since records began in 1993 and 6.5% higher than in 2020 (4,561 registered deaths). The rate of drug poisoning deaths registered in 2021 (84.4 deaths per million) is statistically significantly higher, by 6.2%, than the rate in 2020 (79.5 deaths per million).

The rate of drug poisoning deaths was 81.1% higher in 2021 (84.4 deaths per million) than it was in 2012 (46.6 per million people). The rate has increased every year since 2012 after remaining relatively stable over the preceding two decades.

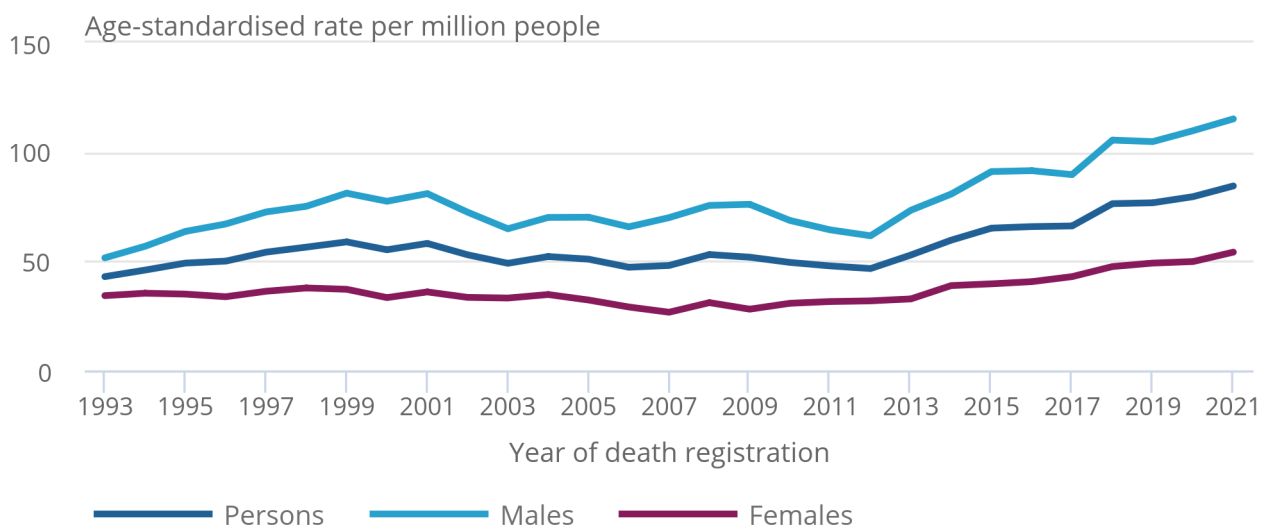
Drug-related mortality rates have also been increasing in [Scotland](#), [Northern Ireland](#) and across [Northern Europe](#) for several years.

Figure 1: Mortality rates from drug poisoning increased for both males and females in 2021

Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 and 2021

Figure 1: Mortality rates from drug poisoning increased for both males and females in 2021

Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 and 2021



Source: Office for National Statistics – Deaths related to drug poisoning in England and Wales

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.

Males accounted for more than two-thirds of registered drug poisonings in 2021 (3,275 male deaths compared with 1,584 female deaths), which is consistent with previous years.

The government has set a target, as part of the [10-year drugs plan for England](#), to have "prevented nearly 1,000 deaths, reversing the upward trend in drug deaths for the first time in a decade" by the end of 2024 to 2025.

3 . Drug misuse in England and Wales

Rates of drug misuse death have continued to increase

Deaths classified as drug misuse must meet either one (or both) of the following conditions: the underlying cause is drug abuse or drug dependence, or any of the substances involved are controlled under the [Misuse of Drugs Act 1971](#). Information on the specific drugs involved in a death is not always available, therefore figures on drug misuse are underestimates.

Of the 4,859 registered drug poisoning deaths in 2021, 3,060 were identified as drug misuse. This represents 63.0% of drug poisonings. If we exclude deaths where no information was available on the drug(s) involved (1,219 deaths), then 84.1% of drug poisoning deaths were drug misuse.

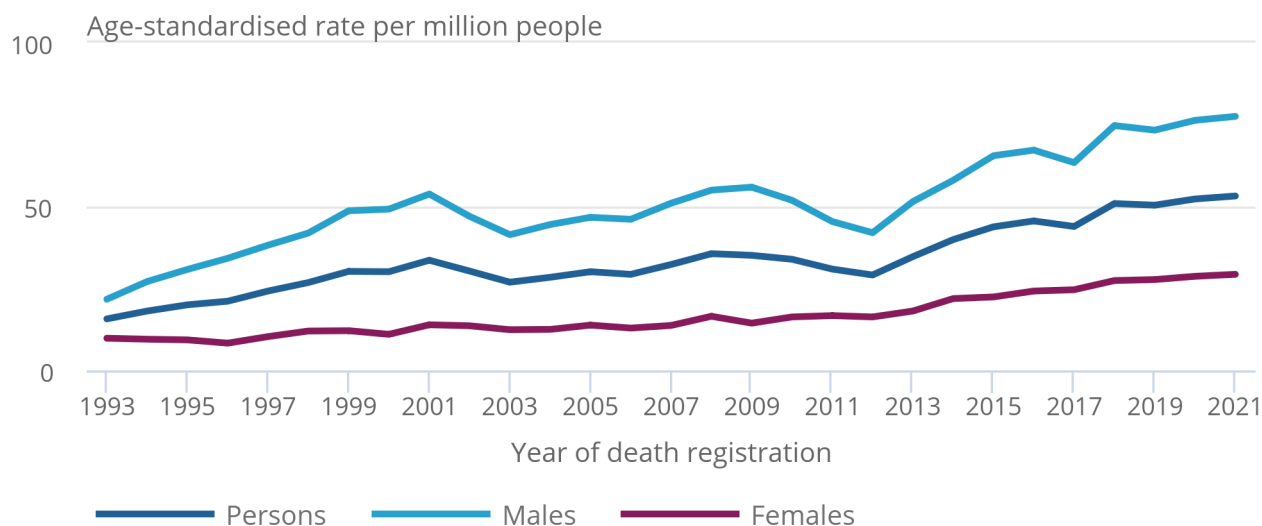
The rate of death relating to drug misuse in 2021 was 53.2 deaths per million people. The male rate of drug misuse deaths was 77.5 deaths per million in 2021 (2,206 registered deaths) and the female rate was 29.3 deaths per million (854 deaths).

Figure 2: Rates of drug misuse deaths increased in 2021

Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 and 2021

Figure 2: Rates of drug misuse deaths increased in 2021

Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 and 2021



Source: Office for National Statistics – Deaths related to drug poisoning in England and Wales

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.

People born in the 1970s continue to have the highest rates of drug misuse deaths

In 2021, the highest rate of drug misuse deaths was found in those aged 45 to 49 years, closely followed by those aged 40 to 44 years. They are part of the age cohort often referred to as "Generation X", born between the late sixties and early eighties, who have consistently had the [highest rates of drug misuse deaths for the past 25 years](#).

Figure 3: Those born in the 1970s, “Generation X”, have had higher rates of drug misuse death over time

Age-specific mortality rates for deaths related to drug misuse, by age group, England and Wales, registered between 1993 and 2021

Notes:

1. Age-specific mortality rates per million population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.

Download the data

[.xlsx](#)

4 . Drug misuse deaths by English region and in Wales

The North East has had the highest rate of drug misuse deaths of any English region for nine consecutive years

In 2021, the highest rate of drug misuse deaths was observed in the North East (104.1 deaths per million; 255 registered deaths), while the lowest rate was in the East of England (27.4 deaths per million; 166 deaths). The North East has had the highest rate of drug misuse deaths for the past nine years and has a statistically significantly higher rate than all other regions of England.

In Wales, the rate of drug misuse deaths rose to 72.4 deaths per million from 51.1 deaths per million in 2020, returning to the high point recorded in 2018 (72.0 deaths per million). However, it is worth noting that delays in death registrations, which increased during the coronavirus (COVID-19) pandemic, are likely to have affected the figures for Wales (see [Section 6](#)).

Figure 4: Rates of drug misuse death have a marked north-south divide

Age-standardised mortality rate for deaths related to drug misuse, by sex, for countries and regions of England and Wales, registered between 1993 and 2021

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures are for persons usually resident in each country and region, based on boundaries as of May 2022.

Download the data

[.xlsx](#)

5 . Drug poisonings from selected substances

Figures in this section are based on analysis of text that appears on the death certificate that is usually written by the Coroner.

Over half of all drug poisoning deaths involve more than one drug, and it is not possible in those cases to tell which substance was primarily responsible for the death.

Almost half of all drug poisonings continue to involve an opiate

For deaths registered in 2021, a total of 2,219 drug poisoning deaths involved opiates; this was 1.9% lower than in 2020 (2,263 deaths). Opiates were involved in just under half (45.7%) of drug poisonings registered in 2021, increasing to 61.0% when we exclude deaths that had no drug type recorded on the death certificate.

The Office for National Statistics (ONS) does not have access to post-mortem reports or toxicology results, so the accuracy of figures depends on the information provided by the coroner on the death certificate; because of incomplete information, figures for drug misuse and for specific substances are underestimates.

Of the drug poisoning deaths registered in 2021, 25.1% (1,219) had no drug type recorded on the coroner's death certificate (for example, records only mention "drug overdose" or "multiple drug toxicity").

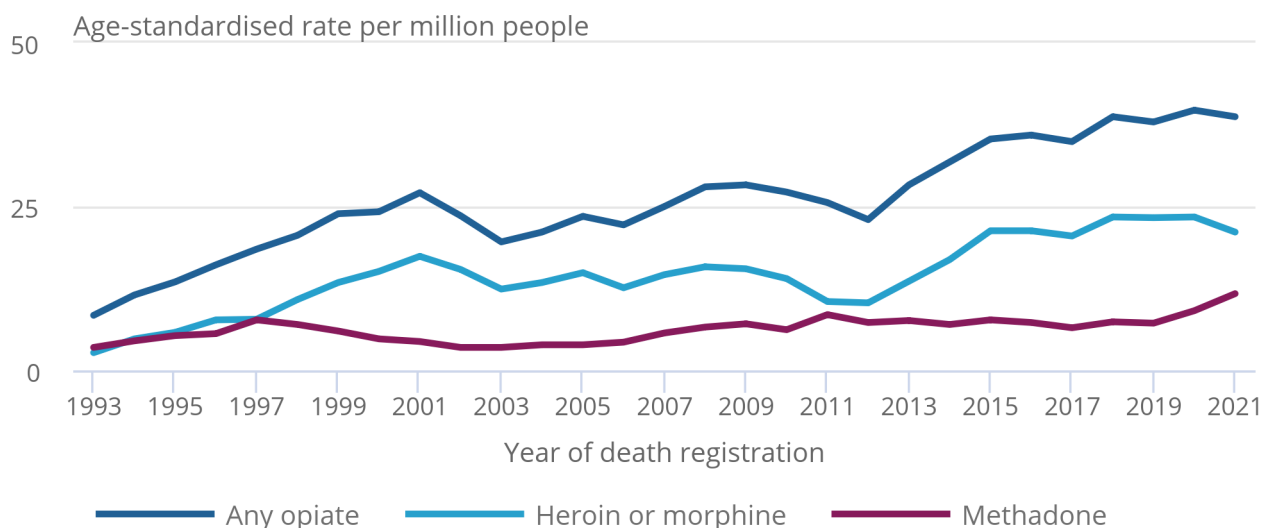
Heroin and morphine continued to be the most frequently mentioned opiates with 1,213 drug poisoning deaths mentioning either one of these substances in 2021 (21.1 deaths per million people).

Figure 5: Rates of deaths involving methadone significantly increased in 2021

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered between 1993 and 2021

Figure 5: Rates of deaths involving methadone significantly increased in 2021

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered between 1993 and 2021



Source: Office for National Statistics – Deaths related to drug poisoning in England and Wales

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.

Cocaine deaths rise for the tenth consecutive year

There were 840 deaths involving cocaine registered in 2021, which was 8.1% higher than the previous year (777 deaths) and more than seven times higher than in 2011 (112 deaths). In 2021, males accounted for 76.8% of the deaths involving cocaine (645 males compared with 195 females). Cocaine has consistently been [the second most-used drug](#), after cannabis, in England and Wales over the past decade.

Significant increase in deaths involving methadone in 2021

There were 663 deaths involving methadone registered in 2021, which is 28.5% higher than the previous year (516 deaths) and a statistically significantly higher rate than the previous year (11.7 deaths per million in 2021 compared with 9.1 in 2020).

Significant increase in deaths involving new psychoactive substances (NPS) in 2021

There were 258 deaths involving new psychoactive substances registered in 2021, which is 88.3% higher than the previous year (137 deaths) and a statistically significantly higher rate than the previous year (4.5 deaths per million people in 2021 compared with 2.4 in 2020). This rise was driven by an increase in the number of deaths involving benzodiazepine analogues (primarily flubromazolam and etizolam) from 62 deaths in 2020 to 171 deaths in 2021.

There have been increasing numbers of deaths involving benzodiazepines (a rise of 13.0% when compared with 2020, from 476 to 538 deaths), pregabalin (a rise of 18.9%, from 344 to 409 deaths) and gabapentin (a rise of 12.7%, from 118 to 133 deaths).

Figure 6: Drug poisonings involving cocaine continued to increase in 2021

Age-standardised mortality rates for selected substances, by sex, England and Wales, deaths registered between 1993 and 2021

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Cause of death was defined using the International Classification of Diseases, Ninth Revision (ICD-9) for the years 1993 to 2000 and Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.
5. Rates are not calculated when the number of deaths is fewer than 10.
6. Codeine is not from compound formulation such as co-codamol; paracetamol includes compounds and dextropropoxyphene mentioned without paracetamol (as dextropropoxyphene is very rarely ingested except in combination with paracetamol).

Download the data

[.xlsx](#)

6 . Death registration delays

Death registration delays in 2021 were the highest on record

Most deaths related to drug poisoning in England and Wales are certified by coroners. The length of time it takes to hold an inquest results in a delay between the date a death occurred and the date of registration. This means that around half of the deaths reported in this bulletin will have occurred in the previous year.

In 2021, the median registration delay for drug poisonings was 205 days (203 days for misuse) in England, up from 189 days in 2020. In Wales in 2021, the delay was 315.5 days (325.5 days for misuse), up from 230.5 in the previous year. Registration delays for 2021 are the highest since the time series began in 1993, amid disruption caused by the coronavirus (COVID-19) pandemic.

7 . Possible explanations for the increase in drug-related deaths

Drug-related deaths have been on an upward trend for the past decade. The reasons behind this are complex and differ by drug type. The overall trend is driven primarily by deaths involving opiates but also by an increase in deaths involving other substances like cocaine.

Across Europe, rates of deaths involving heroin or morphine have been increasing, while [the number of new heroin and morphine users has fallen](#). This indicates higher rates of death among existing long-term drug users. Possible explanations include that:

- there is an [ageing cohort of drug users](#), likely to be suffering from the effects of long-term drug use and becoming increasingly susceptible to a fatal overdose
- new trends in taking specific drugs, including [gabapentinoids](#) and [benzodiazepines](#), alongside heroin or morphine, may increase the risk of an overdose
- there may have been an increase in [disengagement or non-compliance with opiate substitute therapy \(OST\)](#)

The rise in deaths involving cocaine is likely to be a direct consequence of the [increasing prevalence in cocaine use \(PDF, 16.9 MB\)](#). This [increase in cocaine use is also seen across Europe](#). Both [cocaine and heroin have been reported to have high availability in recent years](#), with low prices and high purity levels.

8 . Deaths related to drug poisoning in England and Wales data

[Deaths related to drug poisoning, England and Wales](#)

Dataset | Released 3 August 2022

Annual number of deaths registered related to drug poisoning and median registration delays, in England and Wales. Data presented by cause of death, sex, age, substance(s) involved in the death, country and region, and areas of deprivation.

[Deaths related to drug poisoning by selected substances, England and Wales](#)

Dataset | Released 3 August 2022

Annual number of deaths registered related to drug poisoning in England and Wales by sex, region and whether selected substances were mentioned anywhere on the death certificate, with or without other drugs or alcohol, and involvement in suicides.

[Deaths related to drug poisoning by local authority, England and Wales](#)

Dataset | Released 3 August 2022

Annual number of deaths registered related to drug poisoning, by local authority, England and Wales.

[Deaths related to drug poisoning by date of occurrence, England and Wales](#)

Dataset | Released 3 August 2022

Annual number of deaths occurring related to drug poisoning in England and Wales. Data presented by cause of death, sex, age, substance(s) involved in the death, and country and region.

View [all data used in this statistical bulletin](#) on the Related data page.

9 . Glossary

Drug poisoning

Deaths classified as a drug poisoning must have an applicable International Classification of Diseases (ICD) code assigned as the underlying cause of death; this is determined by international coding rules from the condition or conditions reported by the certifier, as recorded on the certificate. Further information on the definition can be found in [Section 10](#).

Drug misuse

Death classified as drug misuse must be a drug poisoning and meet either one (or both) of the following conditions: the underlying cause is drug abuse or drug dependence, or any of the substances controlled under the Misuse of Drugs Act 1971 are involved. Further information on the definition can be found in [Section 10](#).

Age-standardised mortality rate

Age-standardised mortality rate in this bulletin refers to a weighted average of the age-specific mortality rates per million people that is standardised to the 2013 European Standard Population. Age-standardised mortality rates allow for differences in the age structure of populations and therefore allow valid comparisons to be made between geographical areas, the sexes and over time.

Age-specific mortality rate

Age-specific mortality rate is the total number of deaths per million people of a particular age group, used to allow comparisons between specified age groups.

10 . Measuring the data

Statistics on mortality are derived from the information provided when deaths are certified and registered. Quality and methodology information (QMI) is available in the [Mortality statistics in England and Wales QMI](#), [Deaths related to drug poisoning in England and Wales QMI](#) and the [User guide to mortality statistics](#).

Drug poisoning deaths involve a broad spectrum of substances, including controlled and non-controlled drugs, prescription medicines (either prescribed to the individual or obtained by other means) and over-the-counter medications. As well as deaths from drug abuse and dependence, figures include accidents and suicides involving drug poisonings and complications of drug abuse such as deep vein thrombosis or septicaemia from intravenous drug use. They do not include other adverse effects of drugs, for example, anaphylactic shock or accidents caused by an individual being under the influence of drugs. More details of the drug poisoning definition, including International Classification of Diseases (ICD) codes used, can be found in the [Deaths related to drug poisoning in England and Wales QMI](#).

A death classified as drug misuse must be a drug poisoning and meet at least one of the following conditions. The first condition is that the underlying cause is drug abuse or drug dependence, defined by ICD-10 as mental and behavioural disorders as a result of use of:

- opioids (F11)
- cannabinoids (F12)
- sedatives or hypnotics (F13)
- cocaine (F14)
- other stimulants, including caffeine (F15)
- hallucinogens (F16)
- multiple drug use and use of other psychoactive substances (F19)

The second condition is if any of the substances controlled under [the Misuse of Drugs Act 1971](#) are involved – this includes class A, B and C drugs.

Populations

Figures for 2021 are based on projected populations.

Comparing with other statistics

Scotland and Northern Ireland each produce their own deaths related to drug poisoning statistics. These statistics are compiled by [National Records of Scotland \(NRS\)](#) and the [Northern Ireland Statistics and Research Agency \(NISRA\)](#). The latest available figures for Scotland show that there were 1,444 drug poisoning deaths registered in 2021, of which 1,330 were drug misuse deaths. Scotland's drug misuse deaths decreased by 0.7% compared with 2020. Additional [data on Scottish drug-related deaths](#) are available from the Information Services Division of NHS Scotland. The latest available figures for Northern Ireland show that there were 218 deaths related to drug poisoning registered in 2020, which is an increase of 14.1% from 2019 (191 deaths).

Figures from other sources may not be comparable with those presented here for England and Wales because of differences in data collection methods and in the death registration system.

User-requested data

Special extracts and tabulations of drug-related deaths data (and other causes of mortality) are available to order for a charge (subject to legal frameworks, disclosure control, and resources and agreement of costs, where appropriate). You can enquire by sending an email to health.data@ons.gov.uk. You can also [view our charging policy](#).

11 . Strengths and limitations

Strengths

- Deaths related to drug poisonings are compiled using information supplied when deaths are registered, which gives complete population coverage.
- A robust method is used for the analysis: age-standardised rates allow for differences in the age structure of populations and therefore allow valid comparisons to be made between geographical areas, the sexes and over time.
- Quality-assurance procedures have been undertaken throughout all stages of the analysis to minimise the risk of error; in particular, researchers quality-assure the automated coding of the coroner's text for each individual record.

Limitations

- Statistics are based on the year of death registration – because of death registration delays, around half of these deaths will have occurred in previous years.
- The Office for National Statistics (ONS) does not have access to post-mortem reports or toxicology results, so the accuracy of figures depends on the information provided by the coroner on the death certificate; because of incomplete information, figures for drug misuse and for specific substances are underestimates.
- More than half of all drug poisoning deaths involve more than one drug, and it is not possible in those cases to tell which substance was primarily responsible for the death.
- There is no internationally agreed definition of what constitutes a drug-related death; figures cannot be compared with those produced by other organisations.
- Number of deaths involving new psychoactive substances (NPSs) should be treated with caution because these types of drugs are constantly evolving, and it may not always be possible to identify new substances during post-mortem investigations.
- Local-authority-level rates are aggregated to rolling three-year periods in line with [disclosure control](#) principles and to ensure the robustness of estimates; further information on some of the strengths and limitations can be found in the [Deaths related to drug poisoning in England and Wales QMI](#).

12 . Related links

[Drug-related deaths in Scotland](#)

Web page | Updated 28 July 2022

Scotland's most recent official statistics on drug-related deaths in 2021 and earlier years, broken down by cause of death, selected drugs reported, age and sex.

[Drug-related and drug-misuse deaths in Northern Ireland](#)

Web page | Updated 30 June 2022

Northern Ireland's most recent official statistics on drug-related deaths in 2020 and earlier years, broken down by cause of death, selected drugs reported, age and sex.

[United Kingdom drug situation: Focal Point annual report](#)

Web page | Updated 31 March 2021

Annual report and data tables from the UK Focal Point on Drugs on the national prevalence, impact, prevention and treatment of drug use.

[Drug-related deaths and suicide in prison custody in England and Wales: 2008 to 2016](#)

Article | Released 25 July 2019

The risk of suicide and drug-related deaths among prisoners, based on confidential matching of data from HM Prison and Probation Service and Office for National Statistics (ONS) mortality records.

[Drug-related deaths "deep dive" into coroners' records](#)

Article | Released 6 August 2018

An experimental "deep dive" study investigating deaths related to drug misuse in 2014 and 2015 using available coroners' records.

[More than half of heroin/morphine misuse death hotspots in England and Wales are seaside locations](#)

Web page | Released 4 April 2018

Some of England and Wales's favourite seaside resort areas are now among the towns with the highest rates of deaths from the misuse of heroin or morphine.

[Deaths related to volatile substances, helium and nitrogen in England and Wales: 2001 to 2020 registrations](#)

Article | Released 28 February 2022

Deaths related to volatile substances, helium and nitrogen in England and Wales from 2001 to 2020, by cause of death, sex, age, region and substances involved in the death.

