Office for National Statistics

Statistical bulletin

Deaths related to drug poisoning in England and Wales: 2020 registrations

Deaths related to drug poisoning in England and Wales from 1993 to 2020, by cause of death, sex, age and substances involved in the death.

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1 . Main points

- In 2020, 4,561 deaths related to drug poisoning were registered in England and Wales (equivalent to a rate of 79.5 deaths per million people); this is 3.8% higher than the number of deaths registered in 2019 (4,393 deaths; 76.7 deaths per million).
- Among males, there were 109.7 drug poisoning deaths registered per million in 2020 (3,108 registered deaths), compared with 49.8 deaths per million among females (1,453 deaths).
- Two-thirds (or 2,996) of registered drug poisoning deaths in 2020 were related to drug misuse, accounting for 52.3 deaths per million people.
- Rates of drug-misuse death continue to be elevated among those born in the 1970s, with the highest rate in those aged 45 to 49 years.
- The North East continues to have the highest rate of deaths relating to drug misuse (104.6 deaths per million people); London had the lowest rate (33.1 deaths per million people).
- Approximately half of all drug poisoning deaths registered in 2020 involved an opiate (49.6%; 2,263 deaths); 777 deaths involved cocaine, which is 9.7% more than 2019, and more than five times the amount recorded a decade ago (144 deaths in 2010).

Statistics are based on the year of death registration – because of death registration delays, around half of these deaths will have occurred in the previous year (2019), and the majority will have occurred before the coronavirus (COVID-19) pandemic in the UK.

2 . Drug poisonings in England and Wales

The rate of drug poisonings continues to increase

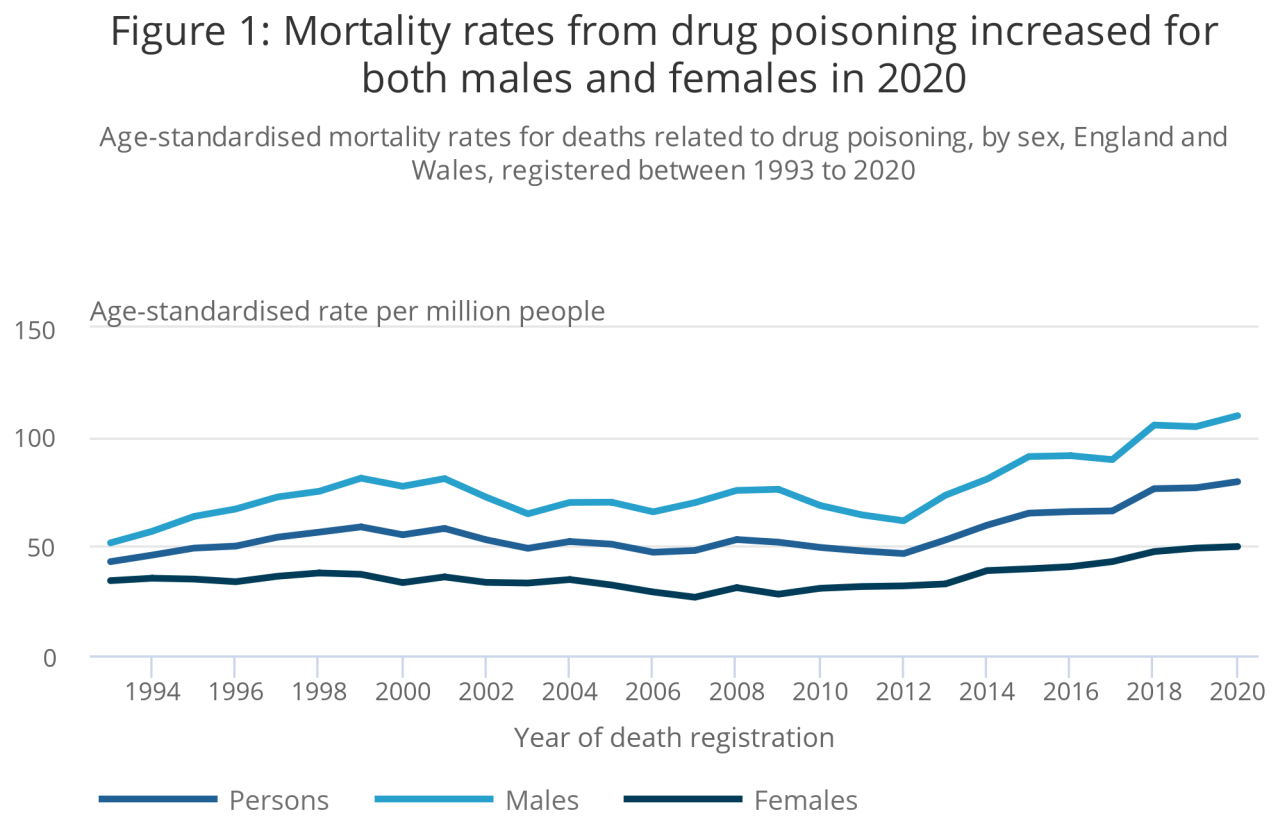
4,561 deaths related to drug poisoning were registered in England and Wales in 2020; the highest number since records began in 1993, and 3.8% higher than in 2019 (4,393 registered deaths).

Rates of drug-related poisoning were 60.9% higher in 2020 (79.5 deaths per million) than they were in 2010 (49.4 per million). The rate has increased every year since 2012; the increase from 2019 was not statistically significant.

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 2020

Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 to 2020



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

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 2020 (3,108 male deaths compared with 1,453 female deaths), consistent with previous years. The male age-standardised rate increased from 104.7 deaths per million in 2019 to 109.7 in 2020, while the female age-standardised rate increased from 49.1 per million in 2019 to 49.8 in 2020. Neither change was statistically significant.

3 . Drug misuse in England and Wales

Two-thirds of drug poisonings are because of drug misuse

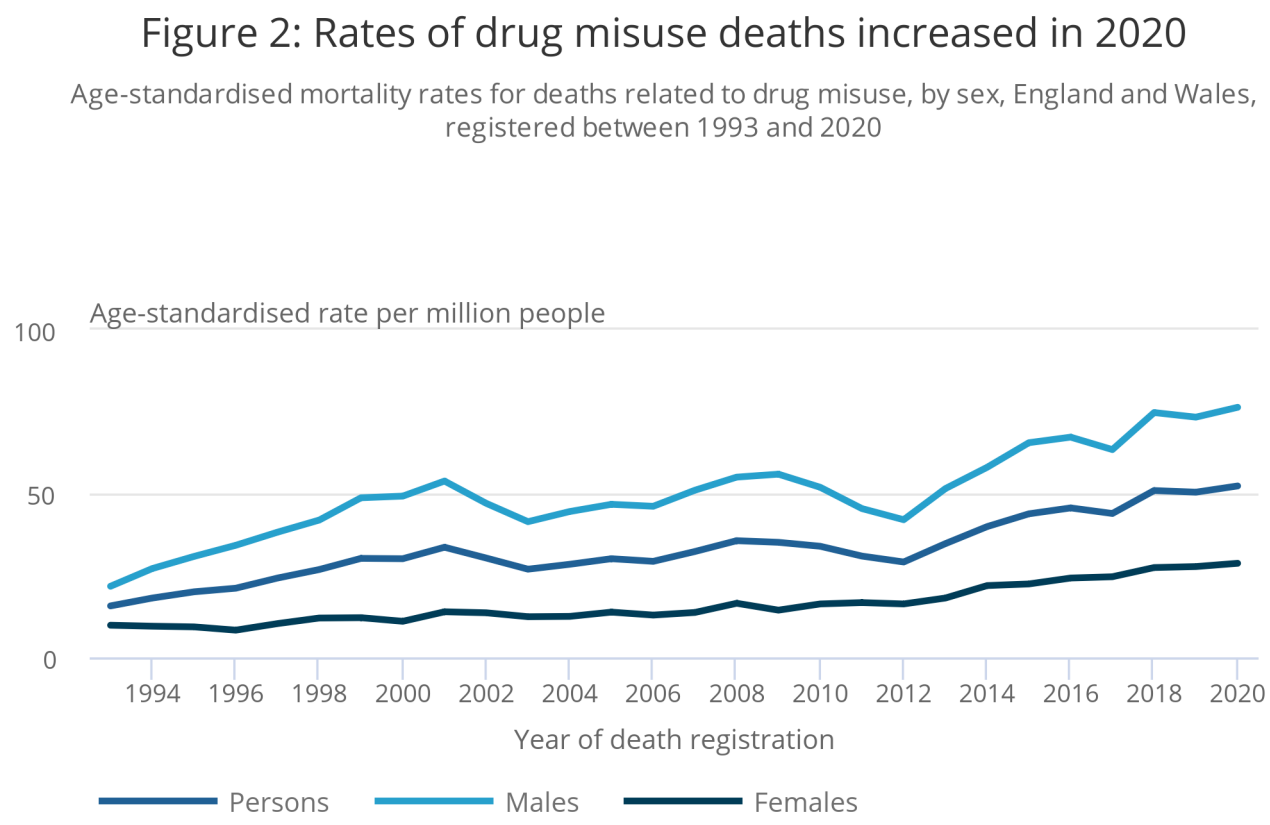
Of the 4,561 registered drug poisoning deaths, 2,996 were related to drug misuse. The rate of death relating to drug misuse in 2020 was 52.3 deaths per million people.

The male rate of drug misuse was 76.3 deaths per million in 2020 (2,165 registered deaths) and the female rate was 28.7 deaths per million (831 deaths).

Death 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.

Figure 2: Rates of drug misuse deaths increased in 2020

Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 and 2020



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 2020, 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. This age cohort, born between 1970 and 1979, and often referred to as ‘Generation x’, have consistently had the highest rates of drug misuse deaths for the past 25 years (see figure 3). For further analysis of this trend see our article on drug-related deaths and suicide among the middle-aged generation.

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 to 2020

Download the data

Notes:

1. Age-specific mortality rates per million people.
2. Rates are not calculated when the number of deaths is fewer than three.
3. 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.
4. Figures are for deaths registered, rather than deaths occurring in each calendar year.
5. Figures for England and Wales include deaths of non-residents.

4 . Drug misuse by English region and Wales

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

In 2020, the highest rate of drug misuse deaths was observed in the North East (104.6 deaths per million; 258 registered deaths), while the lowest rate was in London (33.1 deaths per million; 296 deaths). The North East has had the highest rate of drug misuse for the past eight years and has a statistically significantly higher rate than all other regions of England.

In 2020, Wales recorded its lowest rate of drug misuse deaths since 2014. The rate of 51.1 deaths per million was lower than England (52.1 deaths per million) and a decrease of 9.1% compared with the rate in 2019 (56.2 deaths per million). Wales began the decade with a rate of drug misuse deaths higher than in any region of England (between 2010 and 2012). It is possible that death registration delays in Wales could be effecting the latest figures (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 2020

Download the data

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 2021.

5 . Drug poisonings from selected substances

This section covers deaths from selected drugs. Figures are based on analysis of text, which appears on the death certificate that is usually written by the Coroner after their investigations are complete, which might include an inquest and/or post-mortem.

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

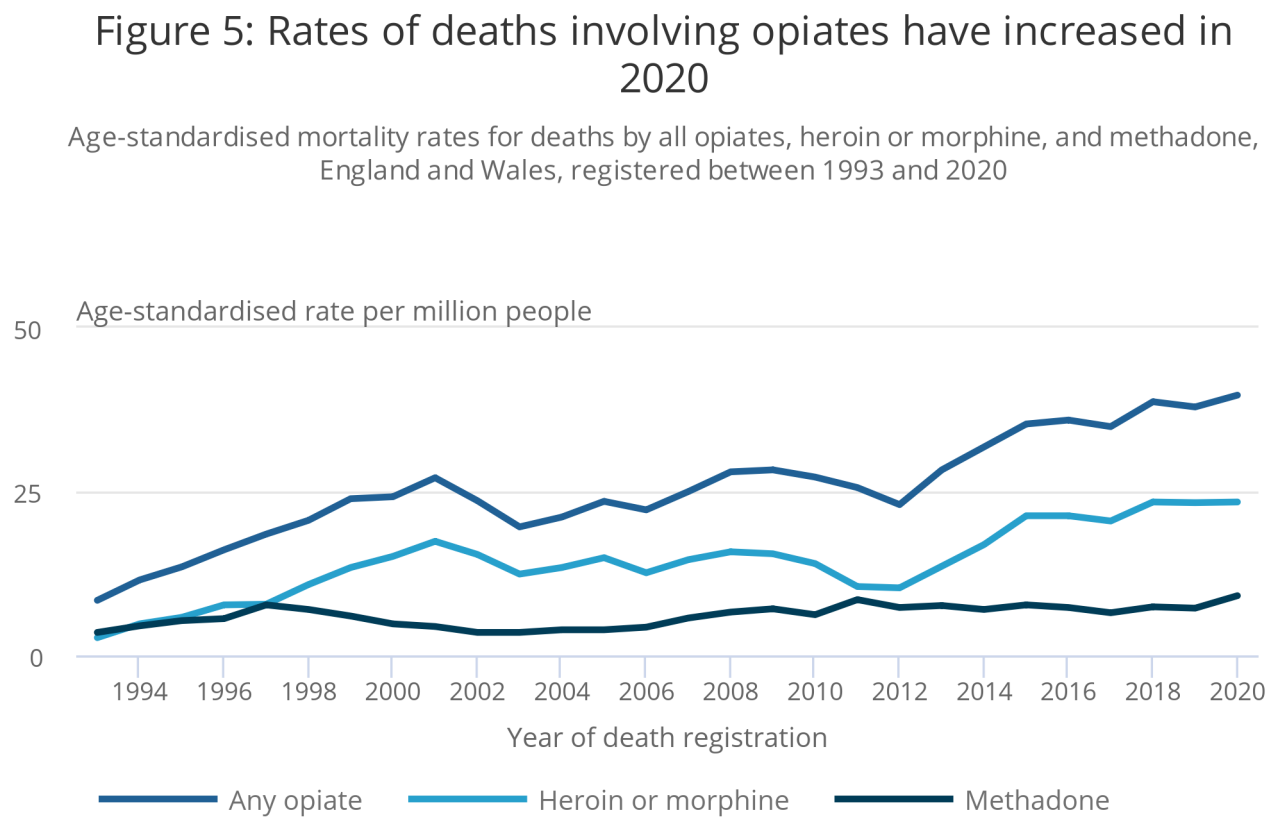
For deaths registered in 2020, a total of 2,263 drug poisoning deaths involved opiates; this was 4.8% higher than in 2019 (2,160 deaths) and 48.2% higher than in 2010 (1,527 deaths). Opiates were involved in just under half (49.6%) of drug poisonings registered in 2020, increasing to 64.5% when we exclude deaths that had no drug type recorded on the death certificate.

23.0% (1,050) of drug poisoning deaths registered in 2020 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 1,337 drug poisoning deaths mentioning either one of these substances in 2020 (23.4 deaths per million people).

Figure 5: Rates of deaths involving opiates have increased in 2020

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered between 1993 and 2020



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 ninth consecutive year

There were 777 deaths involving cocaine registered in 2020, which was 9.7% higher than the previous year (708 deaths), and the number of deaths have increased by five times since 2010 (144 deaths). In 2020, males accounted for 79.7% of the deaths involving cocaine (619 males compared with 158 females).

Increase in potentially dangerous drug combinations

There have been increasing numbers of deaths involving benzodiazepines in 2020 (a rise of 19.3% when compared with 2019; from 399 to 476 deaths), pregabalin (a rise of 41.0%; from 244 to 344 deaths), gabapentin (a rise of 32.6%; from 89 to 118 deaths) and zopiclone (a rise of 4.3%; from 140 to 146 deaths).

Of the 796 deaths mentioning at least one of these substances, 93.5% (744 deaths) mentioned another drug, and 80.7% (642 deaths) mentioned an opiate. These drugs are often taken alongside heroin/morphine to enhance the effect, but they may increase the risk of overdose (see the National Library of Medicine's studies on pregabalin /gabapentin, as well as their studies on benzodiazepines).

Figure 6: Drug poisonings involving cocaine continued to increase in 2020

Age-standardised mortality rates for selected substances, by sex, England and Wales, deaths registered between 1993 to 2020

Download the data

Notes:

1. Age-standardised mortality rates per million people, standardised to the 2013 European Standard Population.
2. Rates are not calculated when the number of deaths is fewer than ten.
3. 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).
4. 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.
5. Figures are for deaths registered, rather than deaths occurring in each calendar year.
6. Figures for England and Wales include deaths of non-residents.

6 . Death registration delays

Death registration delays in 2020 were the highest since 1993

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 2020, the median registration delay was 189 days (also 189 days for misuse) in England, up from 185 days in 2019, and for Wales the delay was 231 days (229 days for misuse) up from 189 in the previous year. Registration delays for 2020 are the highest since the timeseries began in 1993, amid disruption caused by the coronavirus 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:

- 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
- 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. 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 2021
Annual number of deaths registered related to drug poisoning in England and Wales. Data presented by cause of death, sex, age, substance(s) involved in the death, and by country and region.

Deaths related to drug poisoning by selected substances
Dataset | Released 3 August 2021
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, without other drugs and with or without alcohol.

Deaths related to drug poisoning by local authority
Dataset | Released 3 August 2021
Mortality rates for deaths related to drug poisoning and drug misuse, and average registration delay, by local authority, England and Wales.

Deaths related to drug poisoning by date of occurrence
Dataset | Released 3 August 2021
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 by 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: Measuring the data.

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: Measuring the data.

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 and standardised to the 2013 European Standard Population. They 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 is available in the Mortality statistics in England and Wales Quality and Methodology Information (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 Quality and Methodology Information report (QMI).

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, defined by ICD-10 as mental and behavioural disorders due to use of: opioids (F11), cannabinoids (F12), sedatives or hypnotics (F13), cocaine (F14), other stimulants, including caffeine (F15), hallucinogens (F16) and multiple drug use and use of other psychoactive substances (F19)

- any of the substances controlled under the Misuse of Drugs Act 1971 are involved, this include class A, B and C drugs

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 1,339 deaths related to drug poisoning registered in 2020, which was 59 deaths (4.6%) more than in 2019. Additional data on Scottish drug-related deaths are available from theInformation Services Division of NHS Scotland. The latest available figures for Northern Ireland show that there were 191 deaths related to drug poisoning registered in 2019, which is an increase of 1.1% from 2018.

Figures from other sources may not be comparable to 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, 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 . Related links

Drug-related deaths in Scotland
Scotland'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.

Drug-related and drug-misuse deaths in Northern Ireland
Northern Ireland Statistics and Research Agency report | Released 2 March 2021
Northern Ireland's most recent official statistics on drug-related deaths in 2019 and earlier years, broken down by cause of death, selected drugs reported, age and sex.

United Kingdom drug situation: Focal Point annual report
Cross-government report | 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.

Middle-aged generation most likely to die by suicide and drug poisoning
Office for National Statistics article | Released 13 August 2019
Now in their 40s and 50s, the so-called Generation X are dying in greater numbers by suicide or drug poisoning than any other age group.

Drug-related deaths and suicide in prison custody in England and Wales: 2008 to 2016
Office for National Statistics 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
Office for National Statistics 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
Office for National Statistics article | Released 4 April 2018
Some of England and Wales' 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 and helium in Great Britain: 2001 to 2016 registrations
Office for National Statistics article | Released 26 March 2018
Deaths related to volatile substances and helium in England, Wales and Scotland from 2001 to 2016, by region, sex, age, substances involved and cause of death.