

Statistical bulletin

# Deaths related to drug poisoning in England and Wales: 2019 registrations

Deaths related to drug poisoning in England and Wales from 1993 to 2019, by cause of death, sex, age and substances involved in the death.



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# 1 . Main points

- 4,393 deaths related to drug poisoning were registered in 2019 in England and Wales, equivalent to an age-standardised mortality rate of 76.7 deaths per million people; this is similar to the rate in 2018 (76.3 deaths per million) when there were 4,359 registered deaths.
- Among males, there were 104.7 drug poisoning deaths registered per million in 2019 (2,968 deaths), and the female rate was 49.1 deaths per million (1,425 deaths); neither rates were statistically significantly different to those in 2018.
- Males accounted for two-thirds of drug poisoning deaths in 2019, or 2,968 of 4,393 registered deaths, consistent with previous years.
- Two-thirds (or 2,883) of registered drug poisoning deaths were related to drug misuse, a small fall since 2018 but not statistically significant, accounting for 50.4 deaths per million people in 2019.
- The North East had a statistically significantly higher rate of deaths relating to drug misuse than all other English regions (95.0 deaths per million people); East of England had the lowest rate (33.6 deaths per million people).
- Since the 2018 registration year, there were no statistically significant changes to age-standardised rates of any specific drug mentioned on the death certificate, though deaths involving cocaine increased for the eighth successive year, by 7.7% for male deaths and by 26.5% for female deaths.
- New analysis by deprivation shows that, in the last decade, rates of drug poisoning deaths have been higher in the most deprived areas of England and Wales compared with the least; this is particularly the case among those aged in their forties where rates reach peaks that are at least 5.5 times higher in the most deprived areas.

The data described in this release do not cover deaths that occurred during the coronavirus (COVID-19) pandemic.

## 2 . Statistician's comments

Commenting on today's release, Ben Humberstone, deputy director of Health Analysis and Life Events at the ONS said:

"The number of deaths due to drug poisoning registered in 2019 remains at a similar level to 2018. "Almost half of all drug related deaths involved opiates such as heroin and morphine. However, cocaine deaths rose for the eighth consecutive year to their highest level. "The data in this release relate to deaths registered in 2019 and therefore do not cover deaths that occurred during the coronavirus pandemic." "

## 3 . Drug poisonings in England and Wales

### Drug poisoning rates remain high, consistent with 2018 registration year

In England and Wales in 2019, 4,393 deaths related to drug poisoning were registered (see [Glossary](#) for information on the National Statistics definition of drug poisoning).

This is the highest number since the data time series began in 1993 but remains broadly similar (a 0.8% increase) to the number observed in 2018, when there were 4,359 registered deaths. [The highest annual increase \(16%\) in the number of registered deaths from the previous year was in 2018](#), and this was a [statistically significant](#) increase in the rate. 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 (2018). See [Section 8: Death registration delays](#) for more information.

Since 2012, rates of drug-related poisoning have generally been on a steep upward trend in England and Wales, something that has previously been attributed mainly to rises in [heroin](#) and [cocaine](#) deaths. Latest figures show that the rate in the population increased to its highest level at 76.7 deaths per million people in 2019, as shown in Figure 1, increasing from 46.6 deaths per million people in 2012.

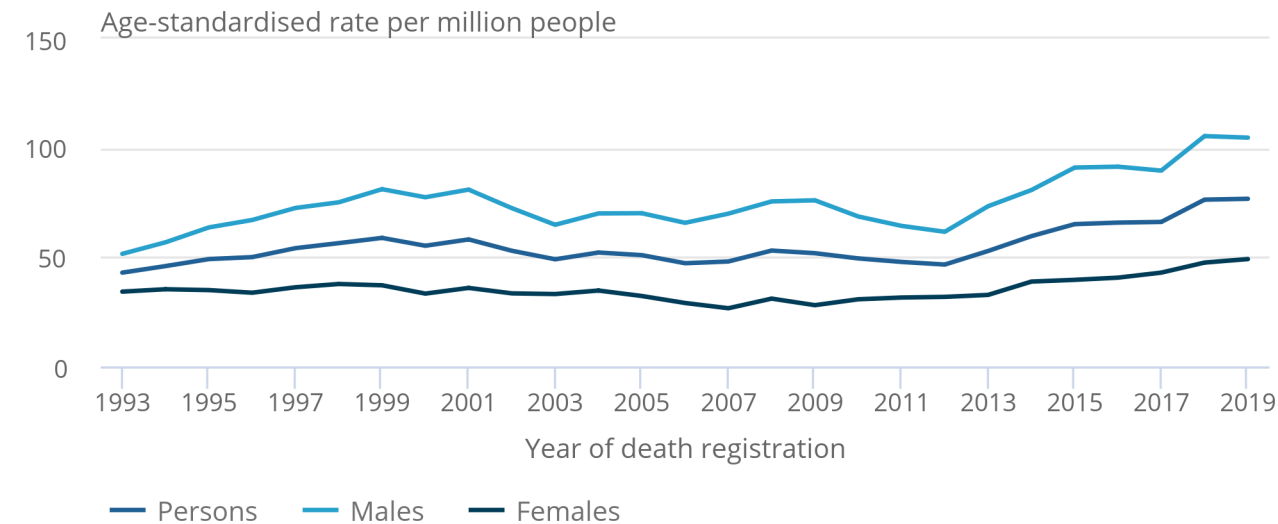
Higher than average drug-related mortality rates have also been reported more widely across Northern Europe (PDF, 3.19MB), including [Scotland](#) and [Northern Ireland](#), over the last several years.

**Figure 1: The female mortality rate from drug poisoning increased in 2019, driving the overall rate upwards**

Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 and 2019

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Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 and 2019



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. More details can be found in [Section 8: Death registration delays](#).
4. Figures for England and Wales include deaths of non-residents.

Males accounted for more than two-thirds of drug poisonings in 2019 (2,968 male deaths compared with 1,425 female deaths), consistent with previous years. The male age-standardised rate decreased to 104.7 deaths per million males in 2019, down from 105.4 in 2018. Conversely, the female age-standardised rate has increased for the 10th consecutive year to 49.1 deaths per million females in 2019, up from 47.5 deaths in 2018. Neither change from 2018 was statistically significant.

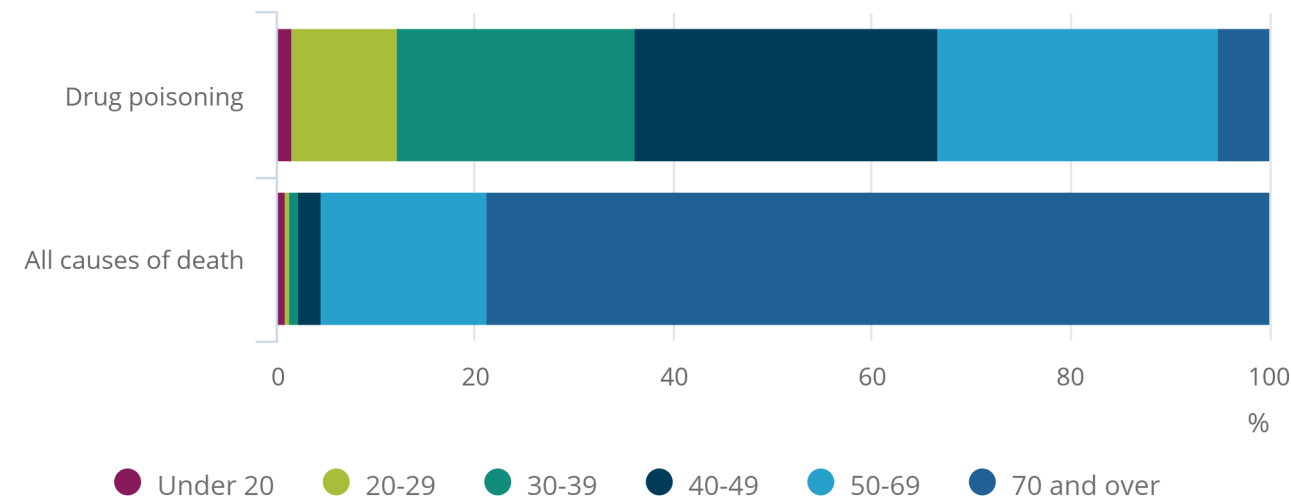
Drug poisoning accounts for less than 1.0% of the total number of [deaths from all causes registered in 2019](#). However, drug poisoning is a well-known cause of premature mortality and in 2019 people aged under 70 years accounted for 95% of deaths from drug poisoning but only 21.3% of deaths from all causes (Figure 2).

**Figure 2: Drug poisoning deaths disproportionately affect younger and middle age people**

Percentage of drug poisonings and deaths from all causes by age group, England and Wales, registered in 2019

Figure 2: Drug poisoning deaths disproportionately affect younger and middle age people

Percentage of drug poisonings and deaths from all causes by age group, England and Wales, registered in 2019



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

Notes:

1. 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](#).
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3. Figures for England and Wales include deaths of non-residents.

## 4 . Drug misuse in England and Wales

## **Two-thirds of drug poisonings are because of drug misuse**

For each year in the last decade, around two-thirds of all drug poisoning deaths were considered drug misuse. Deaths registered in 2019 follow a similar pattern, with 2,883 deaths relating to drug misuse, out of a total of 4,393 drug poisoning deaths. Drug misuse accounts for 70.2% of male and 56.1% of female drug poisonings.

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.

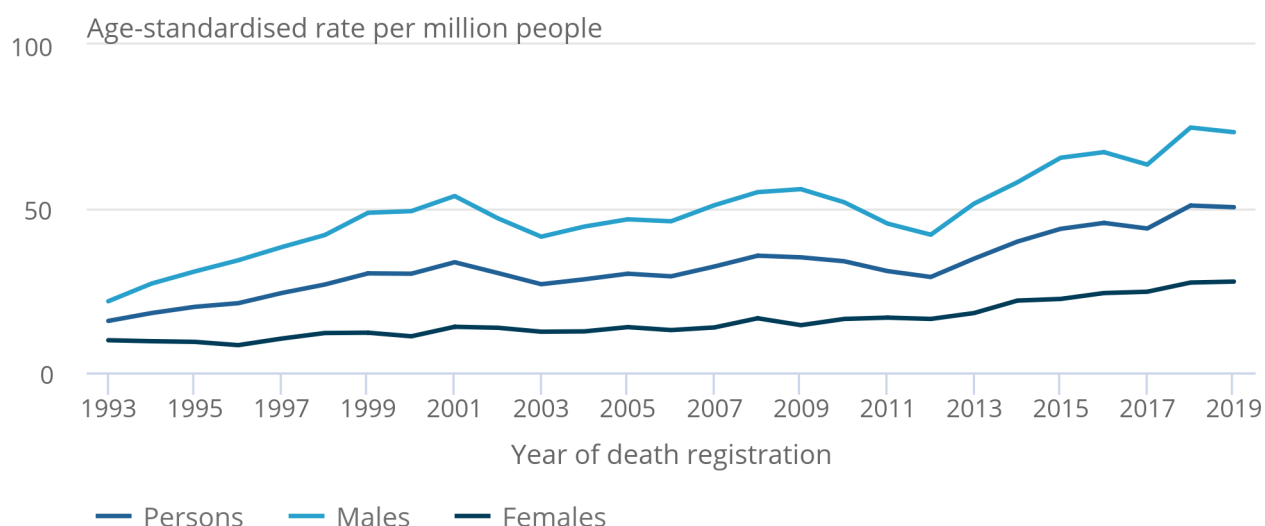
The rate of death relating to drug misuse in 2019 was 50.4 deaths per million people, similar and not statistically different to 2018, where the rate was 50.9 deaths per million people.

### Figure 3: Compared with the previous year, 2019 had a similar rate of drug misuse deaths

Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 and 2019

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Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 and 2019



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. More details can be found in [Section 8: Death registration delays](#).
4. Figures for England and Wales include deaths of non-residents.

The male rate of drug misuse decreased from 74.7 deaths per million in 2018 to 73.3 deaths per million in 2019. The female rate of drug misuse has steadily been increasing for several years and has now reached a new high of 27.7 deaths per million in 2019, up from 27.4 deaths per million in 2018 (Figure 3). Neither change was statistically significant.

## **Since 2016, people aged between 40 and 49 years have had the highest age-specific drug misuse rate**

While there were no statistically significant changes in any age-specific drug misuse rates between 2018 and 2019, figures continue to show that the age at which most people died from drug misuse has increased over time: for the first decade of our data time series 20- to 29-year-olds had the highest rates (between 1993 and 2002), 30- to 39-year-olds then had the highest rates between 2003 and 2015, and more recently 40- to 49-year-olds have had the highest rates. It is possible that the pattern of findings by age shows that a generation of people born in the 1960s and 1970s, known as Generation X, have died from drug misuse in greater numbers over time; such has been [observed when looking at deaths caused by drug poisoning overall](#) (Figure 4).

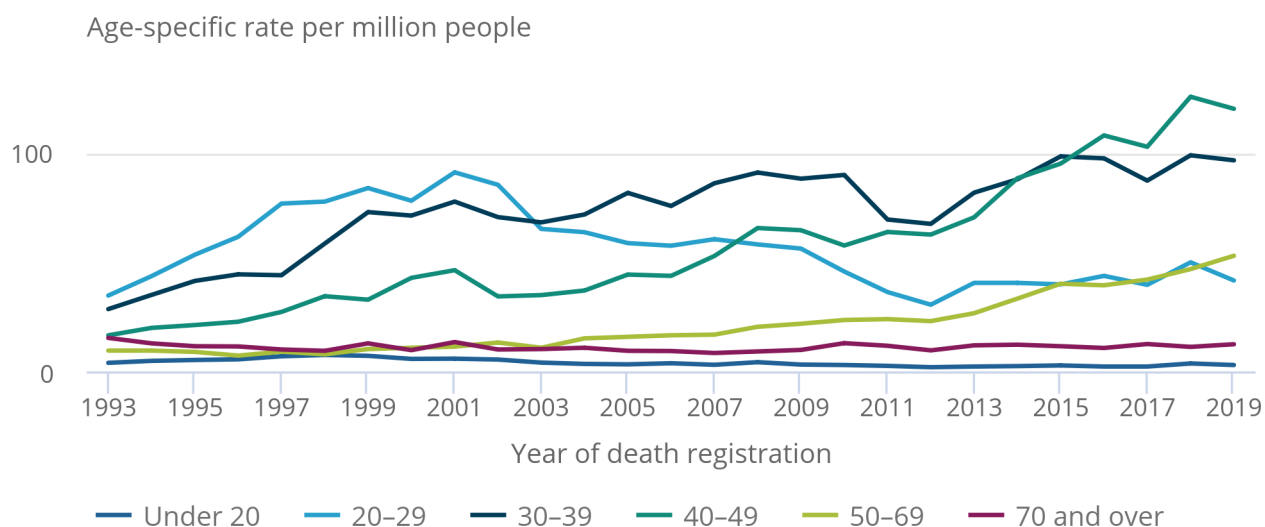


**Figure 4: Those born in the 1960s and 1970s, "Generation X", have had higher rates of drug misuse death over time**

Age-specific mortality rates for deaths related to drug misuse, by age group, England and Wales, registered between 1993 and 2019

Figure 4: Those born in the 1960s and 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 2019



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

**Notes:**

1. Age-specific mortality rates per million people.
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. More details can be found in [Section 8: Death registration delays](#).
4. Figures for England and Wales include deaths of non-residents.

## 5 . Drug misuse by English region and Wales

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

Age-standardised rates of deaths related to drug misuse vary by country and region of England and Wales. In 2019, the highest rates for males and females were observed in the North East (134.2 male and 57.1 female deaths per million), while the lowest rates were in the East of England (49.0 male and 18.4 female deaths per million) (Figure 5).

The North East has had the highest rate of drug misuse for the past seven consecutive years (between 2013 and 2019), before this Wales had a higher rate than all English regions (between 2010 and 2012). The North East continues to be [statistically significantly](#) higher than all other regions of England as well as Wales.

There were no statistically significant changes in rates of drug misuse between 2018 and 2019 for any country or region of England, or Wales, including by sex. Overall trends in drug misuse have largely been increasing in each English region, and Wales, since the data time series began in 1993.

### Figure 5: 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 2019

#### 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. More details can be found in [Section 8: Death registration delays](#).
4. Figures are for persons usually resident in each country and region, based on boundaries as of May 2020.

#### [Data download](#)

Upper and lower tier local authority rates (per 100,000 population) can be found in the [Drug-related deaths by local authority, England and Wales dataset](#), including numbers of death by single year of registration. Age-standardised rates by region and by sex are also available in the accompanying dataset [Deaths related to drug poisoning, England and Wales, Table 6](#).

## 6 . Drug poisonings from selected substances

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

It is important to be aware that over half of all drug poisoning deaths involve more than one drug and/or alcohol, 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 2019, a total of 2,160 drug poisoning deaths involved opiates. This equates to a rate of 37.9 deaths per million people (Figure 6), which was not [statistically significantly](#) different from the 2018 rate of 38.7 deaths per million.

21.3% of drug poisoning deaths registered in 2019 had no drug type recorded on the coroner's death certificate (for example, records only mention "drug overdose" or "multiple drug toxicity" or "no mention").

Opiates are involved in just under half (49.2%) of drug poisonings registered in 2019, increasing to 62.4% when we exclude deaths that had no drug type recorded on the death certificate. As such, trends over time tend to resemble that of all drug poisonings.

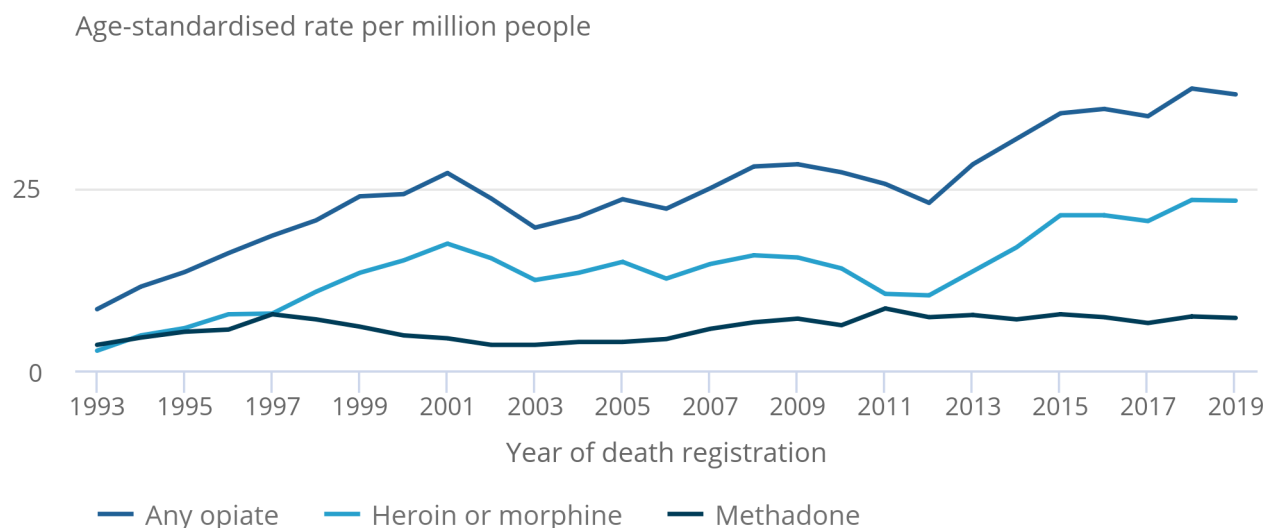
Heroin and morphine continued to be the most frequently mentioned opiates with 1,329 drug poisoning deaths mentioning either one of these substances in 2019. This was similar to the 1,336 deaths observed in 2018 and equates to a rate of 23.3 deaths per million people in 2019. The National Crime Agency recently reported that [heroin purities in the UK reached a 10-year high](#), one factor that could contribute to the high number of deaths involving this substance.

**Figure 6: Rates of deaths involving opiates have decreased from last year, but remain high**

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered 1993 and 2019

## Figure 6: Rates of deaths involving opiates have decreased from last year, but remain high

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered 1993 and 2019



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. More details can be found in [Section 8: Death registration delays](#).
4. Figures for England and Wales include deaths of non-residents.

Figure 7 shows the trend in deaths between 1993 and 2019 by sex, where a specific substance was mentioned on the death certificate, with or without a combination of other drugs and alcohol.

## Figure 7: Drug poisonings involving cocaine increased 26.5% for females and 7.7% for males between 2018 and 2019

Age-standardised mortality rates for selected substances, by sex, England and Wales, deaths registered between 1993 and 2019

## 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 10.
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. More details can be found in [Section 8: Death registration delays](#).
6. Figures for England and Wales include deaths of non-residents.

[Data download](#)

## Cocaine deaths rise for the eighth consecutive year to their highest level

In 2019, a total of 708 registered drug poisoning deaths involved cocaine, over double the number in 2015 (when there were 320 deaths) and over six times higher than in 2011 (when there were 112 deaths).

The age-standardised mortality rate was 12.3 deaths per million in 2019 and, except for 2018, is statistically significantly higher than every year since 1993. Additionally, the male rate in 2019 (19.5 deaths per million) is nearly four times higher than the female rate (5.1 deaths per million). It is not possible to distinguish the form of cocaine (for example, powder cocaine or crack cocaine) in relation to these deaths.

As in recent years, [cocaine is also the second most commonly used drug after cannabis](#), according to the Crime Survey for England and Wales.

The National Crime Agency (NCA) reports that [cocaine use in England, Wales and Scotland increased 290%](#) between 2011 and 2019 (from between 25 and 30 tonnes to 117 tonnes annually). The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) also reports that [the cocaine market is strong \(PDF, 7.45MB\)](#) with the highest estimates of cocaine purity at a retail level in a decade.

## Deaths involving new psychoactive substances (NPS) have remained stable

There were 125 deaths involving new psychoactive substances (NPS, previously known as “legal highs”) in 2019, which equates to an age-standardised rate of 2.1 deaths per million people. This is consistent with levels seen in recent years and very similar to the 126 deaths in 2018 (2.2 per million people). The government introduced the [Psychoactive Substances Act in 2016](#), which established a blanket ban on the importation, production or supply of most psychoactive substances not already covered by the law.

Synthetic cannabinoids are the most frequently mentioned NPS, contributing to 56 deaths in 2019, slightly fewer than the 60 deaths in 2018 but more than double those of 2017, which had 25 deaths. The next most frequently mentioned NPS in 2019 was gamma-Hydroxybutyric acid (GHB; 27 deaths).

## Fentanyl deaths have remained stable

With a rate of 1.0 death per million people, 59 drug poisonings involving fentanyl were registered in 2019. This was similar to the rate observed in 2018 when there were 1.3 deaths per million people (74 deaths).

## 7 . Drug poisonings and deprivation

In this section of the bulletin, we look at rates of drug poisoning death and how these differ among those living in the most deprived local areas versus the least deprived areas by age and sex.

The Index of Multiple Deprivation (IMD) is an overall measure of deprivation based on factors such as income, employment, health, education, crime, the living environment and access to housing within an area. There are different measurements for [England](#) and [Wales](#), which are not directly comparable.

### Drug poisoning rates in the most deprived English quintile were highest among people aged in their forties

During the past decade in England, rates of drug poisoning death by deprivation tended to be [statistically significantly](#) higher for the most deprived than the least deprived local areas (see Figure 8 for males and Figure 9 for females). However, when specifically looking at the mortality rates for those who lived in the least deprived areas of England, there are no apparent differences by age for both males and females.

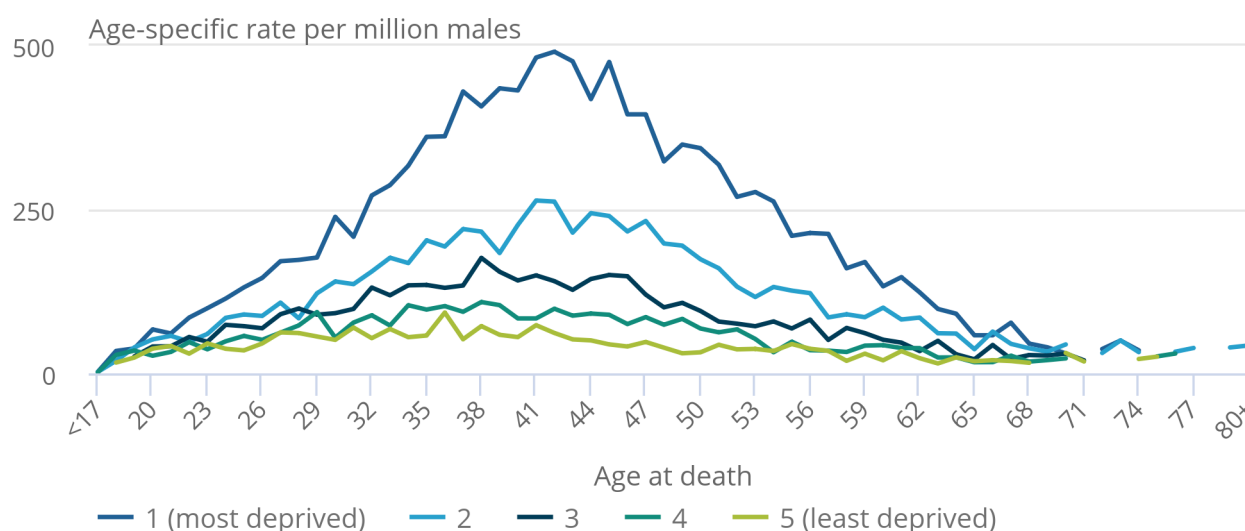
Contrastingly, in the most deprived areas of England, rates of drug poisoning death increase by age, peaking among those aged in their forties from which the rates then decrease by age. Specifically, men aged 42 years old had the highest age-specific rates (490.8 per million), which is about eight times higher than the male rate in the least deprived quintile (61.6 per million). Women aged 44 years old had the highest age-specific rates (200.6 per million), over five-and-a-half times higher than the female rate in the least deprived quintile (35.6 per million).

## Figure 8: English working age men living in the most deprived areas have significantly higher mortality rates from drug poisoning

Age-specific mortality rates for deaths related to drug poisoning, males by single year of age and deprivation quintiles, England, registered between 2010 and 2019 combined

### Figure 8: English working age men living in the most deprived areas have significantly higher mortality rates from drug poisoning

Age-specific mortality rates for deaths related to drug poisoning, males by single year of age and deprivation quintiles, England, registered between 2010 and 2019 combined



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

#### Notes:

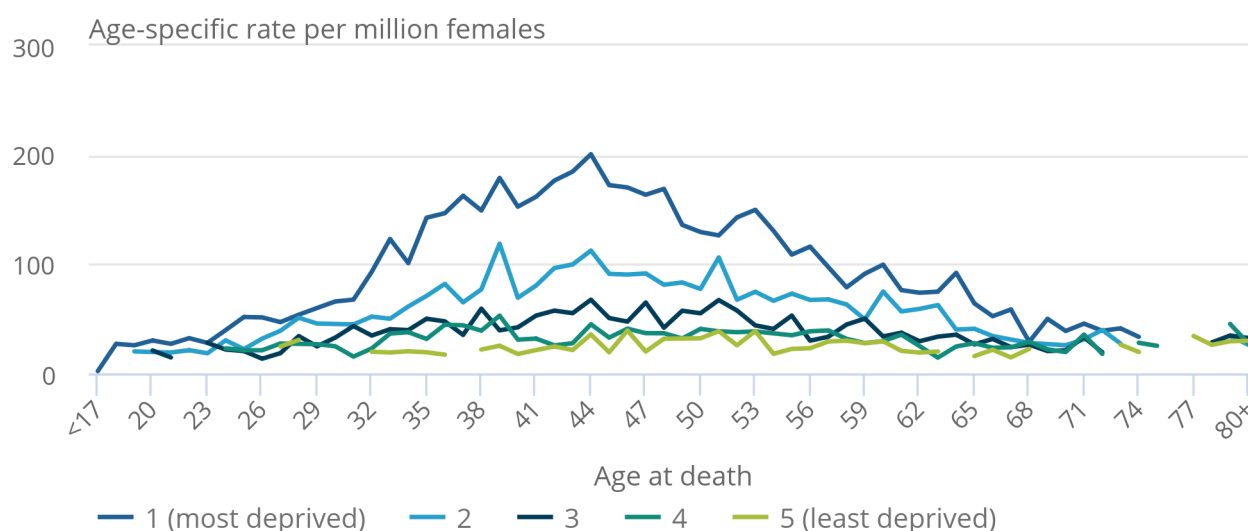
1. Age-specific mortality rates per million males.
2. Cause of death was defined using the International Classification of Diseases, Tenth Revision (ICD-10) from 2001 onwards. More details can be found in the [Quality and Methodology Information](#).
3. Figures are for deaths registered, rather than deaths occurring, between the calendar years 2010 and 2019. More details can be found in [Section 8: Death registration delays](#).
4. Figures exclude death of non-residents and are based on May 2020 boundaries.
5. Deprivation quintiles are based on the English Index of Multiple Deprivation, version 2010 for deaths registered in 2010, version 2015 for deaths registered between 2011 and 2015 and version 2019 for deaths registered between 2016 and 2019.

## Figure 9: English working age women living in the most deprived areas have significantly higher mortality rates from drug poisoning

Age-specific mortality rates for deaths related to drug poisoning, females by single year of age and deprivation quintiles, England, registered between 2010 and 2019 combined

### Figure 9: English working age women living in the most deprived areas have significantly higher mortality rates from drug poisoning

Age-specific mortality rates for deaths related to drug poisoning, females by single year of age and deprivation quintiles, England, registered between 2010 and 2019 combined



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

#### Notes:

1. Age-specific mortality rates per million females.
2. Cause of death was defined using the International Classification of Diseases, 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, between the calendar years 2010 and 2019. More details can be found in [Section 8: Death registration delays](#)
4. Figures exclude death of non-residents and are based on May 2020 boundaries.
5. Deprivation quintiles are based on the English Index of Multiple Deprivation, version 2010 for deaths registered in 2010, version 2015 for deaths registered between 2011 and 2015 and version 2019 for deaths registered between 2016 and 2019.



## **Drug poisoning rates in the most deprived Welsh quintile were also highest among people aged in their forties**

Numbers of deaths related to drug poisoning in Wales are much lower than England and to calculate robust age-specific rates we have used broad age groups (figures broken down by sex can be found in [Table 9 of this dataset](#)).

During the past decade in Wales, age-specific rates of drug poisoning death were statistically significantly higher in the most deprived quintile in each age group between 20 and 69 years, compared against the least deprived quintile (see Figure 10).

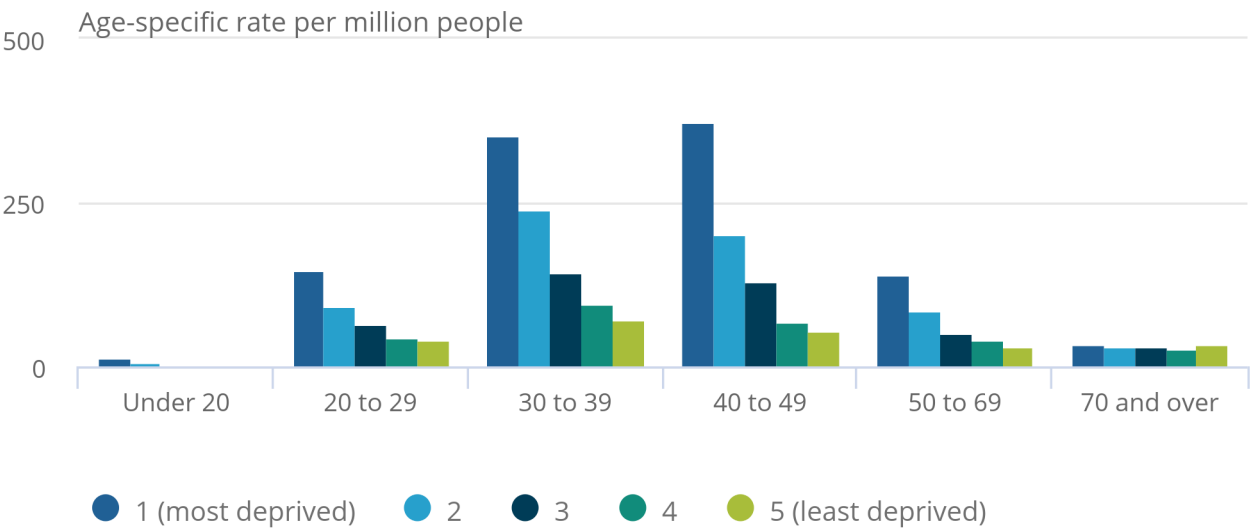
When specifically looking at the rates for those who lived in the least deprived areas of Wales, there are no apparent differences by age group. Contrastingly, in the most deprived areas of Wales, rates of drug poisoning death increase by age, peaking among those aged 40 to 49 years, from which the rates then decrease by age. In the most deprived quintile of Wales, people aged between 40 and 49 years had the highest age-specific rate of drug poisoning (374.3 deaths per million), nearly seven times higher than the rate in the least deprived quintile (53.8 deaths per million).

**Figure 10: Working age people living in the most deprived areas of Wales have significantly higher mortality rates from drug poisoning**

Age-specific mortality rates for deaths related to drug poisoning, persons by age group and deprivation quintiles, Wales, registered between 2010 and 2019 combined

Figure 10: Working age people living in the most deprived areas of Wales have significantly higher mortality rates from drug poisoning

Age-specific mortality rates for deaths related to drug poisoning, persons by age group and deprivation quintiles, Wales, registered between 2010 and 2019 combined



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

Notes:

1. Age-specific mortality rates per million people.
2. Cause of death was defined using the International Classification of Diseases, 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, between the calendar years 2010 and 2019. More details can be found in [Section 8: Death registration delays](#).
4. Figures exclude death of non-residents and are based on May 2020 boundaries.
5. Deprivation quintiles are based on the Welsh Index of Multiple Deprivation, version 2011 for deaths registered in 2010, version 2014 for deaths registered between 2011 and 2014 and version 2019 for deaths registered between 2015 and 2019.

## 8 . Death registration delays

In England and Wales, most drug-related deaths are certified by a coroner following an inquest and cannot be registered until the inquest is completed. This can take months or even years and we are not notified of the death until it is registered. In line with other mortality statistics, drug-related death figures are based on deaths registered in a particular year, rather than those occurring each year. This allows for more timely publications, but can make trends difficult to interpret, especially for smaller geographical areas.

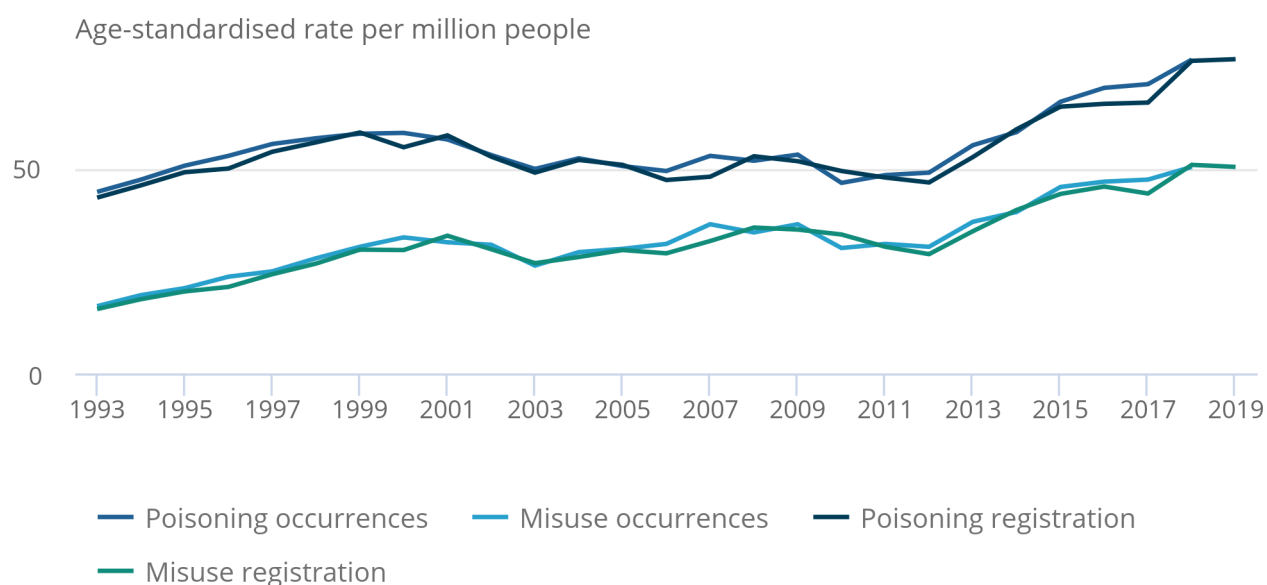
However, for the first time an [accompanying dataset](#) is based on date of death. The figures are not referred to in this bulletin, but help show that at England and Wales level, general trends in drug-related deaths are broadly equal whether the data are analysed by year of occurrence or year of registration.

**Figure 11: Trends in drug poisoning and drug misuse deaths are broadly similar at a national level when using date of death occurrence or registration**

Age-standardised mortality rates for deaths related to drug poisoning and drug misuse, England and Wales, registered and occurred between 1993 and 2019

## Figure 11: Trends in drug poisoning and drug misuse deaths are broadly similar at a national level when using date of death occurrence or registration

Age-standardised mortality rates for deaths related to drug poisoning and drug misuse, England and Wales, registered and occurred between 1993 and 2019



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

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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 and deaths occurring in each calendar year.
4. Figures for England and Wales include deaths of non-residents.

## Registration delays have increased in 2019 in both England and Wales

For all-cause deaths registered in 2019 in England and Wales, 5.4% occurred prior to 2019. The percentage is much higher when looking at deaths relating to drug poisonings and drug misuse, with 54.5% and 54.4% of deaths occurring prior to 2019, respectively. Because of the length of time it takes to hold an inquest, around half of drug-related deaths registered in 2019 will have occurred in earlier years, and many deaths that occurred in 2019 will not yet be included in the figures.

When calculating the average delay between occurrence and registration, the median is used rather than the mean, as the median is not affected by rare cases where it takes many years for the death to be registered. For drug poisonings, the median registration delay for England was 185 days in 2019 (up from 181 days in 2018) and 189 days for Wales (up from 168 days in 2018). The latest registration delay for England is the highest since the data time series began in 1993.

Further information on registration delays, including those for each region and local authority, can be found in our [accompanying datasets](#).

## 9 . Deaths related to drug poisoning in England and Wales data

### [Deaths related to drug poisoning](#)

Dataset | Released 14 October 2020

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 14 October 2020

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 14 October 2020

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 14 October 2020

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](#).

## 10 . 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 11: 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 11: Measuring the data](#).

## Year of registration

Figures are based on deaths registered in each calendar year, rather than the date on which the death occurs. For more information, view [Section 8: Death registration delays](#).

## 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.

## Statistical significance

The term “significant” refers to statistically significant changes or differences based on unrounded figures. Significance has been determined using the 95% [confidence intervals](#), where instances of non-overlapping confidence intervals between figures indicate the difference is unlikely to have arisen from random fluctuation.

## 95% confidence intervals

A confidence interval is a measure of the uncertainty around a specific estimate. If a confidence interval is 95%, it is expected that the interval will contain the true value on 95 occasions if repeated 100 times. As intervals around estimates widen, the level of uncertainty about where the true value lies increases. The size of the interval around the estimate is strongly related to the number of deaths, prevalence of health states and size of the underlying population. At a national level, the overall level of error will be small compared with the error associated with a local area or a specific age and sex breakdown.

# 11 . Measuring the data

Statistics on mortality are derived from the information provided when deaths are certified and registered. These statistics are assessed fully compliant with the [Code of Practice for Statistics](#) and are therefore designated as [National Statistics](#).

More quality and methodology information on strengths, limitations, appropriate uses, and how the data were created 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 [Quality and Methodology Information report](#).

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

## Populations

Mortality rates are calculated using the number of deaths and [mid-year population estimates](#) provided by the Office for National Statistics (ONS) Population Estimates Unit. Population estimates are based on the decennial UK census estimates and use information on births, deaths and migration to estimate the mid-year population in non-census years.

## 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 1,187 deaths related to drug poisoning registered in 2018, which was 253 deaths (27.1%) more than in 2017. There were large increases in the number of deaths where benzodiazepines or opiates were implicated in, or potentially contributed to, the cause of death. [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 189 deaths related to drug poisoning registered in 2018, an increase of 39.0% from 2017.

Public Health England (PHE) provide [data on a wide range of indicators](#) related to substance misuse and mental health issues. With a focus on England particularly, NHS Digital produce an [annual compendium](#), bringing together an array of data related drug misuse. Statistics for Europe are available from the [European Monitoring Centre for Drugs and Drug Addiction \(EMCDDA\)](#).

Figures from other sources to the ONS 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) for England and Wales are available to order for a charge (subject to legal frameworks, disclosure control, resources and agreement of costs, where appropriate). Such requests or enquiries should be made via email to [health.data@ons.gov.uk](mailto:health.data@ons.gov.uk). Our [charging policy](#) is also available.

## 12 . Strengths and limitations

Further information on some of the strengths and limitations can be found in the [Deaths related to drug poisoning in England and Wales QMI](#).

### Strengths

- Deaths related to drug poisonings, including drug misuse deaths, 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.
- We only refer to groupings that have at least 20 deaths. For these, reliable age-standardised rates can be calculated, reducing the likelihood of the findings being a result of chance. In our accompanying datasets, rates have been marked as unreliable where there are fewer than 20 deaths, and we have not produced age-specific rates for age groups with fewer than 10 deaths.
- 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 the previous year (2018).
- The Office for National Statistics (ONS) does not have access to post-mortem reports or toxicology results, so the accuracy of figures on deaths related to drug poisoning depends on the information provided by the coroner on the death certificate. There can be variation in the level of detail given by individual coroners.
- More than half of all drug poisoning deaths involve more than one drug and/or alcohol, 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.
- 21.4% of drug poisonings were also suicides in 2019 and the change in the standard of proof used by coroners in England and Wales might result in an increased number of deaths recorded as suicide (for more information see [Suicides in England and Wales: 2019 registrations](#)).
- Local authority level rates are aggregated to rolling three-year periods in line with [disclosure control](#) principles and to ensure the robustness of estimates; the data time series is available from 2001 to 2003.



## 13 . Related links

### [Drug-related deaths in Scotland](#)

National Records of Scotland report | Released 16 July 2019

Scotland's most recent official statistics on drug-related deaths in 2018 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 16 January 2020

Northern Ireland's most recent official statistics on drug-related deaths in 2018 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 | Released 31 July 2020

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