Office for National Statistics

Statistical bulletin

Deaths related to drug poisoning in England and Wales: 2018 registrations

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

Contact:
Emyr John, Asim Butt and Gerald McQuade
mortality@ons.gov.uk
+44 (0)1633 456501

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Table of contents

1 . Main points

- There were 4,359 deaths related to drug poisoning registered in England and Wales in 2018, the highest number and the highest annual increase (16%) since the time series began in 1993.
- The male drug poisoning rate has significantly increased from 89.6 per million males in 2017 to 105.4 in 2018; while the female rate increased for the ninth consecutive year to 47.5 per million females in 2018, the latest increase was not statistically significant compared to 2017.
- Two-thirds (or 2,917) of drug-related deaths were related to drug misuse, accounting for 50.9 deaths per million people in 2018.
- The North East had a significantly higher rate of deaths relating to drug misuse than all other English regions; London had the lowest rate.
- Between 2017 and 2018, there were increases in the number of deaths involving a wide range of substances, though opiates, such as heroin and morphine, continued to be the most frequently mentioned type of drug.
- Deaths involving cocaine doubled between 2015 and 2018 to their highest ever level, while the numbers involving new psychoactive substances (NPS) returned to their previous levels after halving in 2017.

2 . Things you need to know about this release

Figures are presented for deaths related to drug poisoning (involving controlled and/or non-controlled drugs) and drug misuse in England and Wales from 1993 onwards. The definition of a drug poisoning death is based on the International Classification of Diseases (ICD) code assigned as the underlying cause of death. The definition of a drug misuse death is one where either the underlying cause is drug abuse or drug dependence, or the underlying cause is drug poisoning and any of the substances controlled under the Misuse of Drugs Act 1971 are involved. More details of the definitions and ICD codes can be found in the Quality and Methodology Information report.

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 than half of all drug poisoning deaths involve more than one drug and sometimes also alcohol, and it is often not possible to tell which substance was primarily responsible for the death.

The figures presented show deaths registered each year, rather than deaths occurring each year. Almost all drug-related deaths are certified by a coroner. Because of the length of time it can take for an inquest to be completed, around half of drug-related deaths registered in 2018 will have occurred in earlier years, and many deaths that occurred in 2018 will not yet be included in the figures. Section 8 of this bulletin provides further information.

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. Registration delays can have more influence on figures for smaller geographical areas such as regions and local authorities, so these should be treated with caution. Extra information is provided in the commentary where differences in the trends do exist. See the User guide to mortality statistics for more information on registration delays.

3 . Statistician’s comments

Ben Humberstone, Deputy Director for Health Analysis and Life Events, said:

> “The number of deaths registered from drug use in 2018 was the highest since our records began in 1993. We have also seen the biggest year-on-year percentage increase".
>
> “Previously, this had been linked to a rise in deaths related to opiates like heroin and morphine, but last year there were also increases in deaths across a wider variety of substances including cocaine and what had been known as "legal highs".
>
> “We produce these figures to help inform decision makers working towards protecting those at risk of dying from drug poisoning”

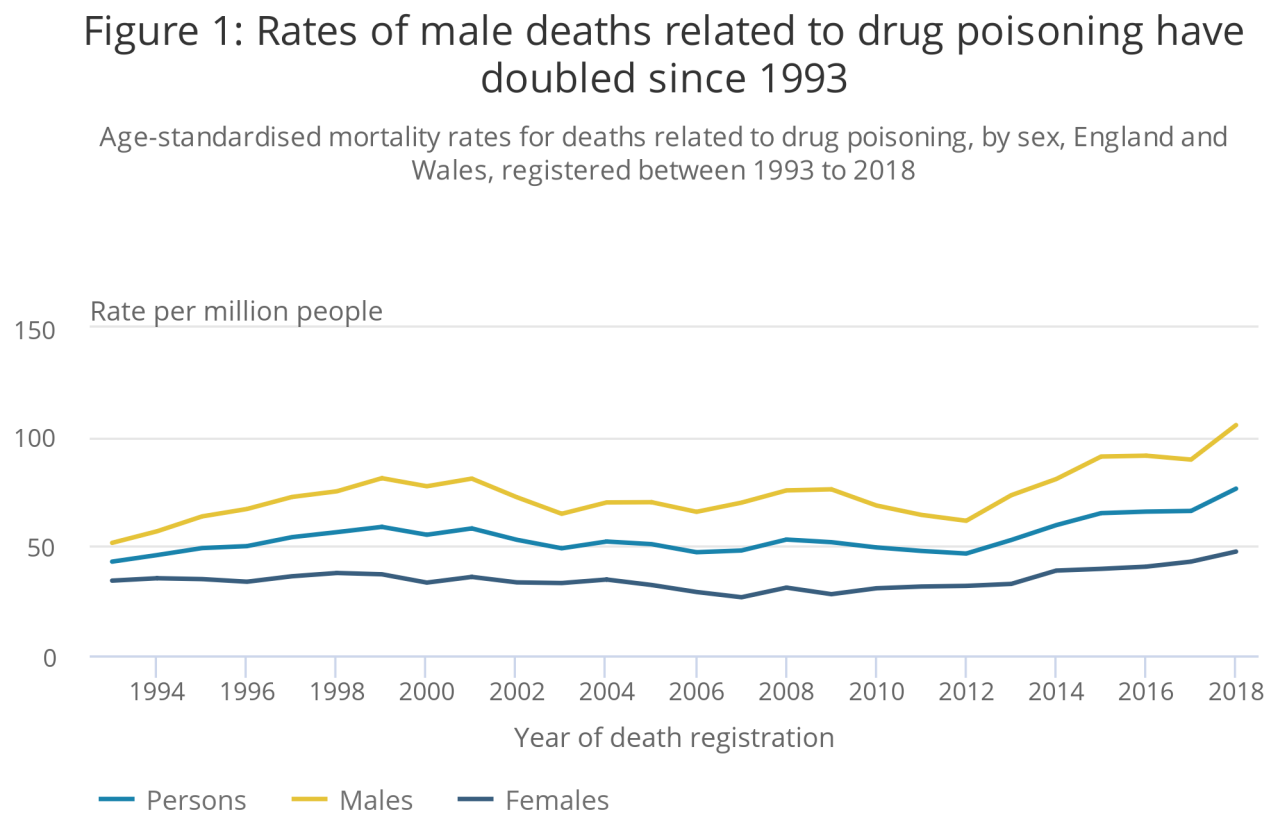
4 . Drug poisoning deaths registered in 2018 increased significantly

In England and Wales, there were 4,359 deaths relating to drug poisoning registered in 2018, 603 more than in 2017 when there were 3,756 (a 16% increase). This equates to a statistically significant increase in the drug poisoning rate, with 76.3 deaths per million people in 2018, compared with 66.1 deaths per million in 2017.

Since 2012, rates of drug-related poisoning have generally been on an upward trend in England and Wales, something that has previously been attributed to a rise in heroin deaths. Higher than average drug-related mortality rates have also been reported more widely across Northern Europe (PDF, 7.45MB), including Scotland and Northern Ireland, over the last several years.

Figure 1: Rates of male deaths related to drug poisoning have doubled since 1993

Age-standardised mortality rates for deaths related to drug poisoning, by sex, England and Wales, registered between 1993 to 2018



Source: Office for National Statistics

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 drug poisonings in 2018 (2,984 male deaths compared to 1,375 female deaths). The male age-standardised rate increased significantly from 89.6 deaths per million males in 2017 to 105.4 in 2018. The female age-standardised rate has increased for the ninth consecutive year to 47.5 deaths per million females in 2018, up from 42.9 deaths in 2017. The latest increase in the female rate was not statistically significant compared to the previous year.

In 2018, most drug poisoning deaths had an underlying cause of accidental poisoning (80% of male deaths and 67% of female deaths); this was followed by intentional self-poisoning (16% of male deaths and 30% of female deaths). The remaining deaths were caused by mental and behavioural disorders as a result of drug use (3% for males and females), or assault involving drugs (less than 1% for males and females).

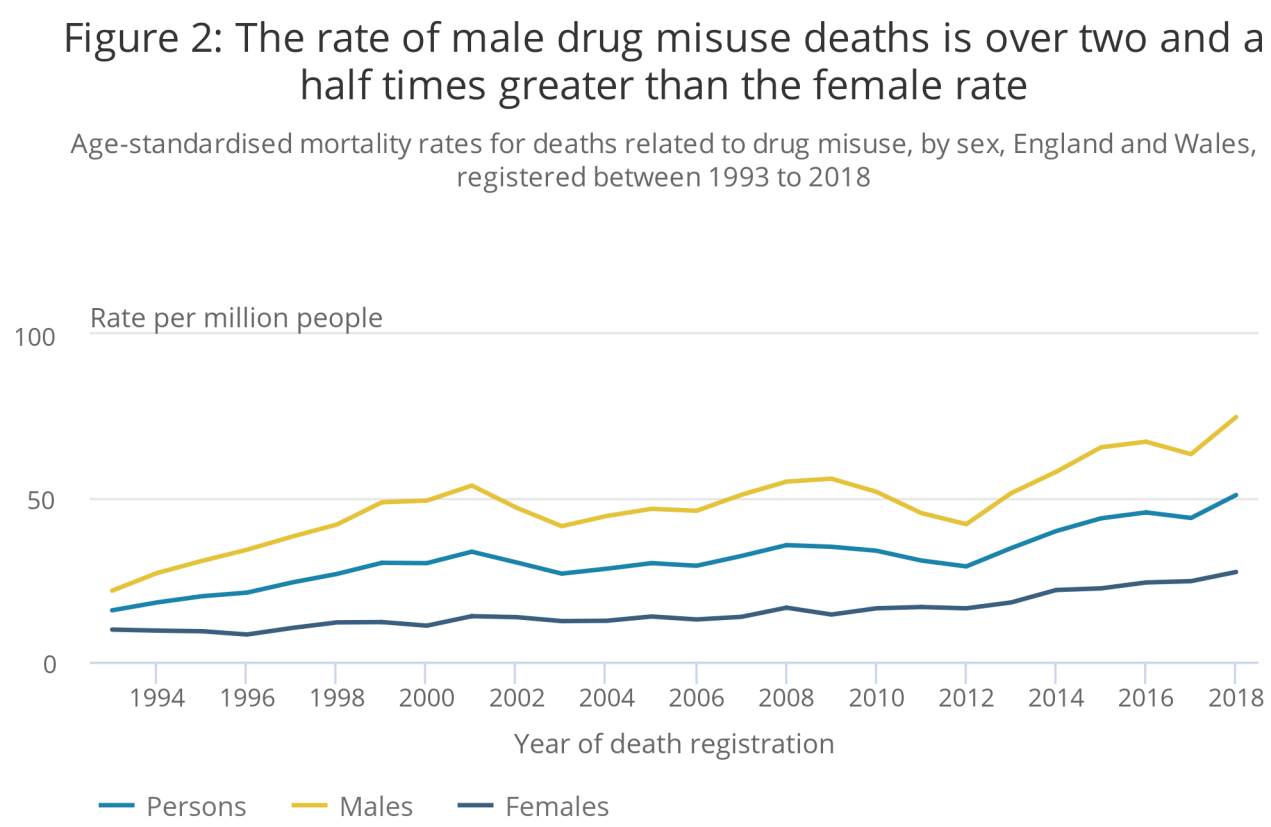
5 . Two-thirds of drug poisonings are because of drug misuse

For each year in the last decade, around two-thirds of drug poisoning deaths were from drug misuse (a definition of drug misuse can be found in the “Things you need to know” section). 2018 follows a similar pattern, with 2,917 deaths relating to drug misuse, out of a total of 4,359 drug poisoning deaths.

The rate of death relating to drug misuse in 2018 was 50.9 deaths per million people; a statistically significant increase compared to 43.9 deaths per million people in 2017.

Figure 2: The rate of male drug misuse deaths is over two and a half times greater than the female rate

Age-standardised mortality rates for deaths related to drug misuse, by sex, England and Wales, registered between 1993 to 2018



Source: Office for National Statistics

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.

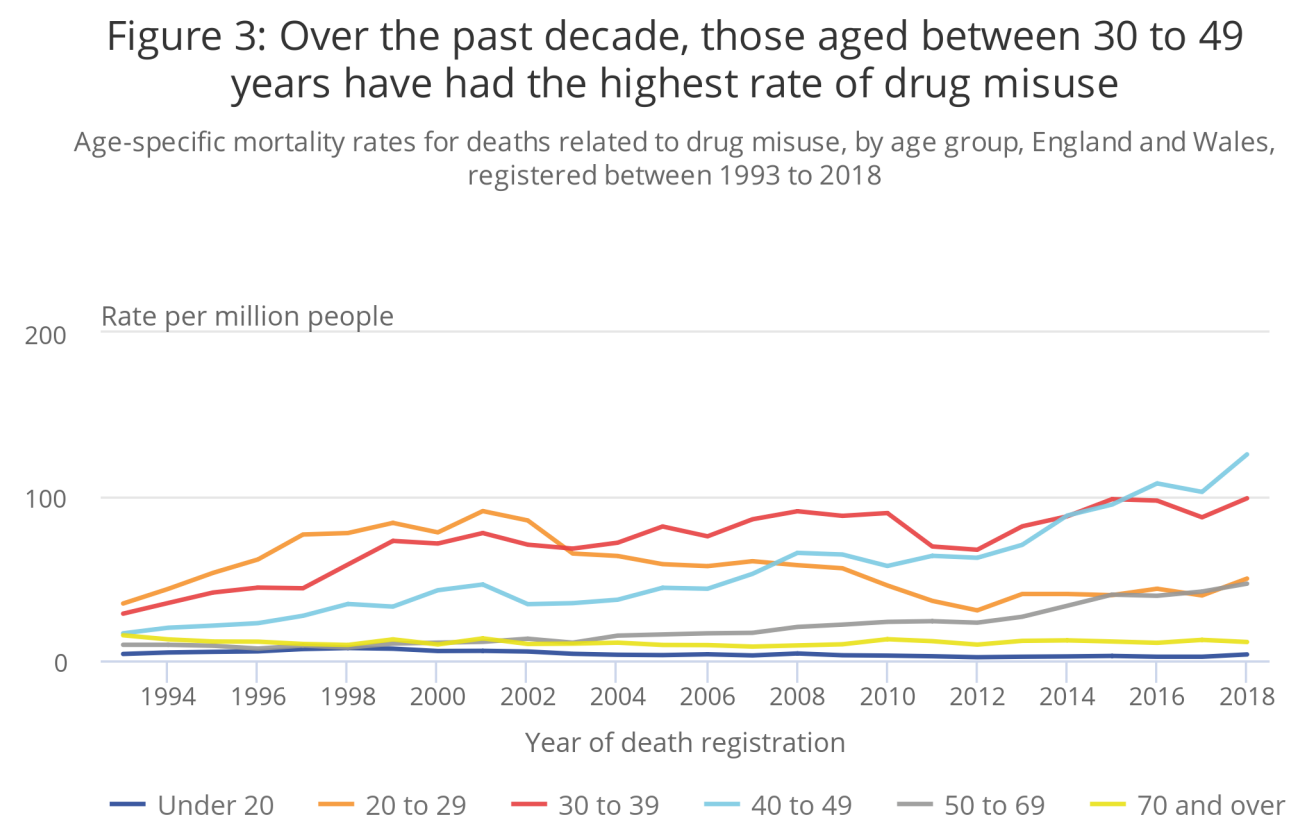
From 2017 to 2018, the number of deaths related to drug misuse increased 18% for males (from 1,794 to 2,125 deaths) and 12% for females (from 709 to 792 deaths). The increase among males was statistically significant; 74.7 deaths per million males in 2018 compared to 63.4 in 2017. The female rate also increased, though not significantly, from 24.6 per million females in 2017 to 27.4 per million in 2018.

In 2018, those aged between 40 and 49 years had the highest age-specific drug misuse rate at 125.7 deaths per million people; a rate that is significantly higher than that observed in 2017 for the same age group, when there was a rate of 102.8 deaths per million people. The rate among those aged 40 to 49 years was also significantly higher than that of any other age group in 2018.

Those aged 20 to 29 years is the only other group to have a significantly different rate compared to the previous year; among this group, there were 49.9 deaths per million in 2018 compared to 39.6 deaths per million in 2017. For both sexes those aged 40 to 49 years and 30 to 39 years have had the highest rates over the past decade.

Figure 3: Over the past decade, those aged between 30 to 49 years have had the highest rate of drug misuse

Age-specific mortality rates for deaths related to drug misuse, by age group, England and Wales, registered between 1993 to 2018



Source: Office for National Statistics

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.
4. Figures for England and Wales include deaths of non-residents.

6 . The rate of drug misuse in the North East remains the highest of all English regions or Wales

In 2018, the rate of drug misuse in the North East (96.3 deaths per million people) was significantly higher than any other English region or in Wales. London had the lowest rate of any region in 2018, at 34.9 deaths per million; it is also the only region to have a significant increase in 2018 compared to 2017.

The rate of drug misuse has largely been increasing in each English region, and Wales since the time series began in 1993. Over the last decade, the rate of drug misuse has more than doubled in the North East (46.3 deaths per million in 2008 increasing to 96.3 in 2018). Wales followed the North East with the next biggest increase in its rate over the last ten years with an 84% increase (39.2 deaths per million in 2008 increasing to 72.0 in 2018). London and the South West saw the smallest change in this period.

Figure 4: Drug misuse has a marked North-South divide

Age-standardised mortality rate for deaths related to drug misuse, by country and region, registered in 2018

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 2019.

Download the data

More data by region, including overall drug poisoning rates, can be found in the accompanying dataset Deaths related to drug poisoning, England and Wales, Table 6. Smaller geographies can be found in the Drug-related deaths by local authority, England and Wales dataset.

7 . Deaths from selected substances

This section covers the latest trends in deaths from selected drugs, focusing on 2018. For longer time series and more breakdowns by substance, please see the data tables with this publication.

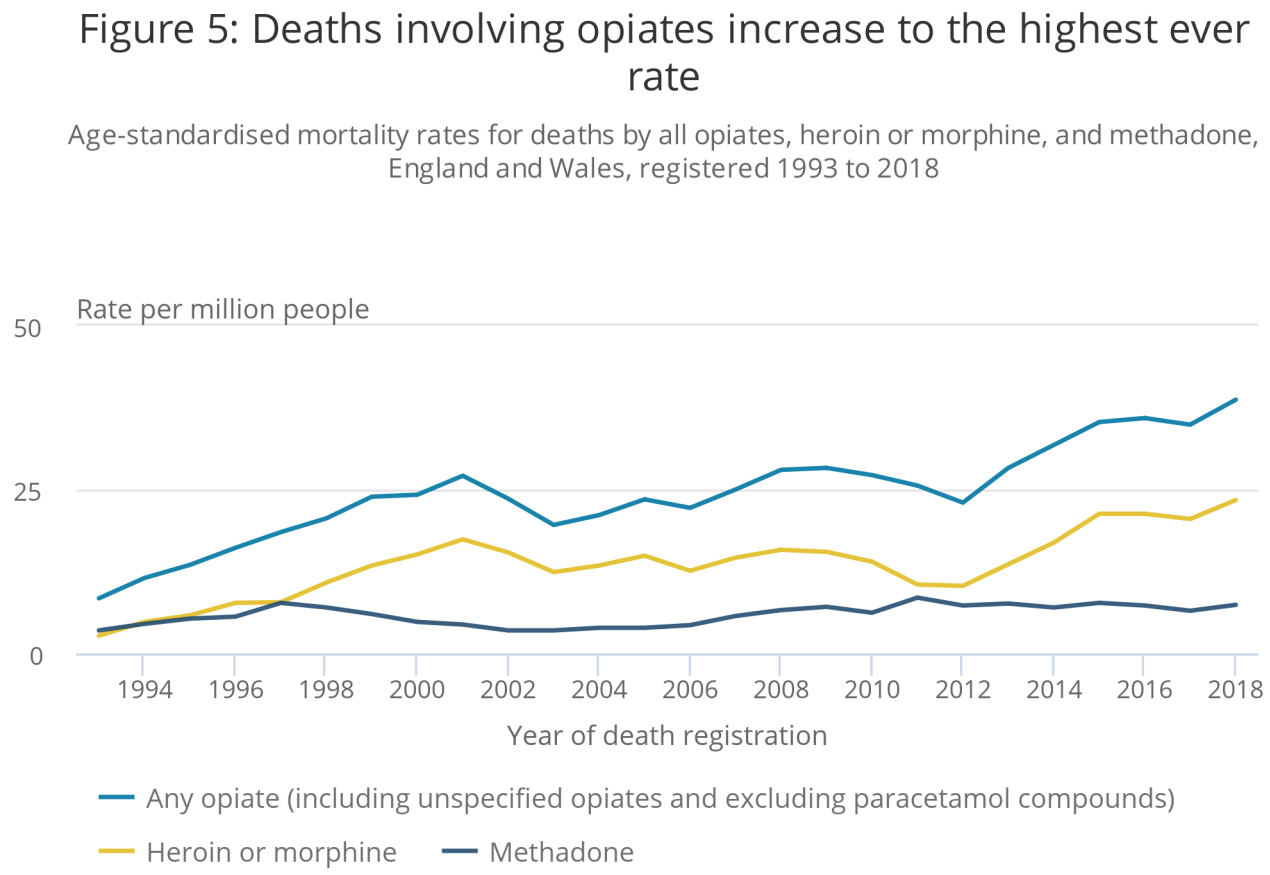
Over half of all drug poisonings involve an opiate

Since 2006, over half of all drug poisoning deaths in each year have involved an opiate. In 2018, a total of 2,208 drug poisoning deaths had an opiate mentioned on the death certificate (51% of all drug poisoning deaths). This equates to a rate of 38.7 deaths per million people, which has significantly increased when compared to the 2017 rate of 34.9 deaths per million.

Heroin and morphine continued to be the most frequently mentioned opiates with 1,336 drug poisoning deaths mentioning either one of these substances in 2018. This equates to a rate of 23.4 deaths per million people, a statistically significant increase when compared to the rate in 2017 (20.5 deaths per million). The latest National Crime Agency, 2019 (PDF, 6.17MB) reports that “heroin purities remain consistently high”, one factor in the high number of deaths involving this substance.

Figure 5: Deaths involving opiates increase to the highest ever rate

Age-standardised mortality rates for deaths by all opiates, heroin or morphine, and methadone, England and Wales, registered 1993 to 2018



Source: Office for National Statistics

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.

Figure 6 shows the trend in deaths between 1993 and 2018, where a specific substance was mentioned on the death certificate, with or without a combination of other drugs and alcohol.

Figure 6: Trends in drug poisoning deaths involving selected substances

Age-standardised mortality rates for selected substances, England and Wales, deaths registered between 1993 to 2018

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.

Download the data

Deaths involving new psychoactive substances (NPS) have returned to previous levels

There were 125 deaths involving new psychoactive substances (NPS, previously known as "legal highs") in 2018, which equates to an age-standardised rate of 2.2 deaths per million people. This is a statistically significant increase from the 61 deaths in 2017 (1.0 per million), and a return to the level seen in 2016 when there were 123 deaths (2.1 per million). 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.

The National Crime Agency, 2019 (PDF, 6.17MB) reports that the market for synthetic drugs appears to be expanding. Synthetic cannabinoids are one of the most commonly used new psychoactive substances (NPS), and contributed to 60 deaths in 2018, more than double the 24 deaths in 2017. The next most frequently mentioned NPS in 2018 was gamma-Hydroxybutyric acid (GHB; 27 deaths).

Fentanyl deaths remained stable

England and Wales had 74 fentanyl deaths in 2018, similar to the levels observed in 2017. A further 31 deaths relating to fentanyl analogues, such as carfentanyl, were registered in 2018; the majority (77%) of these deaths occurred in the previous year, consistent with reports about a spate of deaths related to fentanyl analogues in 2017 (PDF, 2.94MB).

Cocaine deaths rise for the seventh consecutive year to their highest level

There were 637 deaths related to cocaine in 2018, almost double the number registered a few years earlier in 2015 when there were 320 deaths. With an age-standardised rate of 11.1 deaths per million people in 2018, the latest rate is significantly higher than every other year since the time series started in 1993.

Deaths mentioning cocaine show a rising trend since 2011, in which they have increased from 1.9 deaths per million people. It is not possible to distinguish the form of cocaine (for example, powder cocaine or crack cocaine) in relation to these deaths.

The National Crime Agency, 2019 (PDF, 6.17MB) reports that purity levels for cocaine are at historically high levels, one factor in the higher number of deaths involving this substance. Cocaine is also the second most commonly used drug after cannabis, according to the Crime Survey for England and Wales (PDF, 1.34MB), although the survey only covers cocaine, amphetamine and ecstasy among class A drugs.

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.

For all-cause deaths registered in 2018 in England and Wales, 6% occurred prior to 2018. The percentage is much higher when looking at deaths relating to drug poisonings and drug misuse: in both cases, 51% occurred prior to 2018.

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 181 days in 2018 (up from 172 days in 2017) and 168 days for Wales (similar to 2017 when the delay was 167 days). The latest registration delay for England is the highest since the 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 . Drug-related deaths in other countries

Figures on drug-related deaths in Scotland are available from the National Records of Scotland. The latest figures available show that there were 1,187 deaths related to drug poisoning registered in 2018, which was 253 deaths (27%) 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 figures from the Northern Ireland Statistics and Research Agency show that there were 136 deaths related to drug poisoning in 2017, an increase of 7% from 2016.

Statistics for Europe are available from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) .

Figures for other countries (which in turn influence the European rate) may not be comparable to those presented for England and Wales, because of differences in data collection methods and in the death registration system.

10 . Links to related ONS information

All the data used to compile the tables and charts in this bulletin can be downloaded in Excel format. Data on all drug-related deaths (including controlled and non-controlled drug poisonings) are also available in the same Excel file. An additional Excel file containing drug-related deaths by selected substances mentioned on the death certificate, without other drugs, and with or without alcohol is available. Finally, a third Excel document containing statistics on drug-related deaths by local authority can also be downloaded.

Special extracts and tabulations of drug-related deaths data for England and Wales are available to order (subject to legal frameworks, disclosure control, resources and the ONS charging policy (PDF, 65.78KB), where appropriate). User requested data will be also published. Enquiries should be made to the Mortality Analysis Team via email at mortality@ons.gov.uk or by telephone on +44 (0)1633 456501.

We publish a wide range of mortality statistics, the most detailed of these being the Deaths registered in England and Wales series, which contains a detailed breakdown of the deaths by sex, age, and underlying cause of death, as well as other mortality statistics.

We also release statistics on trends in alcohol-specific deaths in the UK. This includes deaths from chronic conditions associated with long-term alcohol abuse like liver cirrhosis, as well as acute alcohol poisoning. Local area mortality data by sex, age and underlying cause of death can be downloaded from the Nomis website.

11 . Quality and methodology

The Deaths related to drug poisoning in England and Wales Quality and Methodology Information report contains important information on:

- the strengths and limitations of the data and how it compares with related data
- uses and users of the data
- how the output was created
- the quality of the output including the accuracy of the data