

Statistical bulletin

Deaths of homeless people in England and Wales: 2018

Experimental Statistics of the number of deaths of homeless people in England and Wales. Figures are given for deaths registered in the years 2013 to 2018.

Contact:
Asim Butt and Emyr John
mortality@ons.gov.uk
+44 (0)1633 455952

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1 . Main points

- There were an estimated 726 deaths of homeless people in England and Wales registered in 2018, the highest year-to-year increase (22%) since our time series began.
- Most of the deaths in 2018 were among men (641 estimated deaths; 88% of the total).
- The mean age at death was 45 years for males and 43 years for females in 2018; in the general population of England and Wales, the mean age at death was 76 years for men and 81 years for women.
- Two in five deaths of homeless people were related to drug poisoning in 2018 (294 estimated deaths), and the number of deaths from this cause has increased by 55% since 2017.
- London and the North West had the highest numbers of deaths in 2018, with 148 (20% of the total number) and 103 (14% of the total number) estimated deaths of homeless people respectively.

2 . Statistician's comment

“The deaths of 726 homeless people in England and Wales recorded in 2018 represent an increase of over a fifth on the previous year. That’s the largest rise since these figures began in 2013

“A key driver of the change is the number of deaths related to drug poisoning which are up by 55% since 2017 compared to 16% for the population as a whole.

“The ONS estimates are designed to help inform the work of everyone seeking to protect this highly vulnerable section of our community.”

Ben Humberstone, Head of Health Analysis and Life Events, Office for National Statistics

3 . Things you need to know about this release

This release reports Experimental Statistics on deaths among homeless people in England and Wales. Figures are provided for deaths registered in the years 2013 to 2018, with selected breakdowns by age and sex, cause of death, and geographical area. [Experimental Statistics](#) are those that are in the testing phase and not yet fully developed. When interpreting the figures, we recommend users refer to the section, [Limitations of the analysis](#).

Deaths of homeless people were identified from the death registration records held by the Office for National Statistics (ONS), and a statistical method called capture-recapture modelling was applied to estimate the most likely number of additional registrations not identified as homeless people. The figures reported here are the total estimated numbers, except where described as being based on identified records only. The method used provides a robust but conservative estimate, so the real numbers may still be higher.

Definition of homelessness

The definition of homelessness used in this release follows from what is available in death registrations data to identify affected individuals. Our statistics mainly include people sleeping rough or using emergency accommodation such as homeless shelters and direct access hostels, at or around the time of death. An upper age limit of 74 years is applied to avoid accidental inclusion of elderly people who died in some institutional settings. This means that a small number of genuine deaths of homeless people aged 75 years or over might have been excluded. Further information on the methods used to identify cases are explained in our [Quality and Methodology Information](#) report.

Definitions of homelessness exist for different purposes and there are variations across the UK. A Government Statistical Service (GSS) report [published earlier this year](#) explored the feasibility of harmonising definitions of homeless for official statistics, but concluded this was not possible in the short term because of substantive differences in administrative data systems and legal definitions of homelessness used in each country of the UK. A recently published [interactive tool](#) allows users to compare different homeless definitions used, and official statistics produced across the four countries of the UK.

Comparability with other data sources

[Rough sleeping statistics for England](#) are produced annually by the Ministry of Housing, Communities and Local Government (MHCLG). The publication provides information on a single night snapshot of rough sleeping taken annually in England using street counts and intelligence-driven estimates. The MHCLG also publishes [Experimental Statistics on the number of households threatened by homelessness](#), using data from the Homelessness Case Level Information Collection (H-CLIC) data system.

The Welsh Government also collects [data on homelessness](#) including the number of households threatened with homelessness, and the number of households in temporary accommodation. Separate figures on [the number of rough sleepers in Wales](#) are also available; as with England, these statistics are based on a snapshot of people who were recorded as sleeping rough in a single night.

The figures in this release cannot be directly compared with other official statistics on homelessness, including rough sleeping statistics, as we have used a wider definition of homelessness and our statistics are for the year as a whole rather than a being for a single snapshot in time.

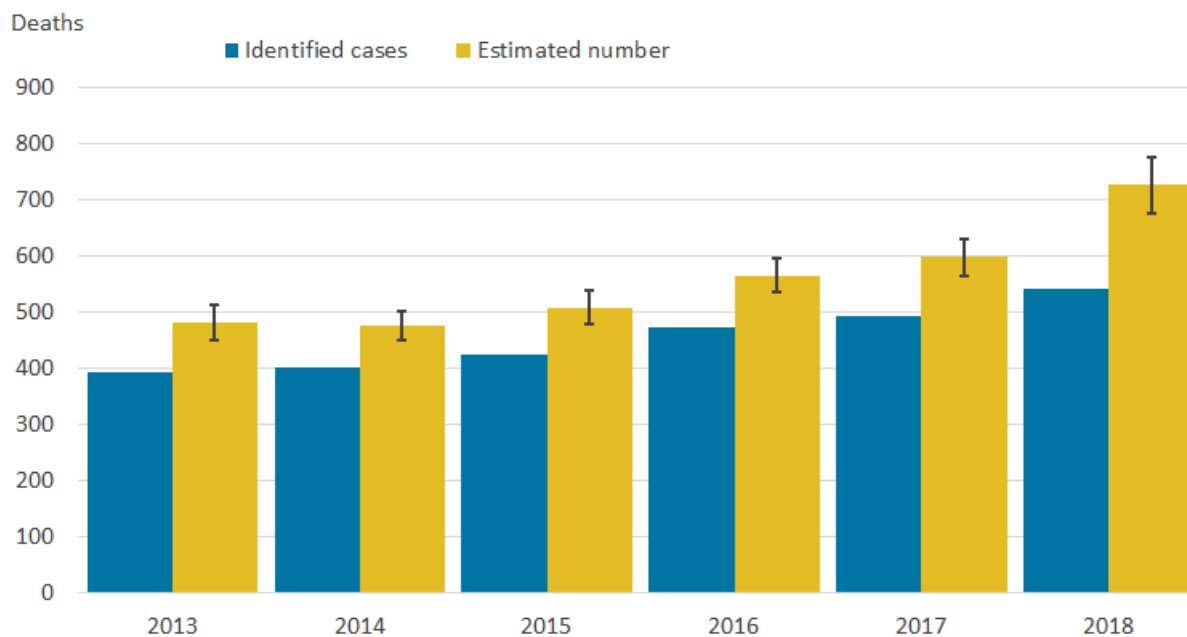
4 . Deaths of homeless people have increased significantly since 2017

In 2018, there were an estimated 726 deaths of homeless people in England and Wales, 129 (22%) more deaths than in 2017 when there were 597 estimated deaths. The increase is statistically significant and represents the largest year-to-year increase in estimated deaths since the time series began in 2013. The number of identified homeless cases increased by 10%, from 491 to 541 deaths since 2017. Of the 541 identified cases in deaths registration data, 95% (516 deaths) were recorded in England.

Since 2013, increases in the identified and estimated number of deaths may be the result of an improvement in the recording of homelessness in death registrations data. Confidence intervals have been provided to allow comparisons in the number of estimated deaths over time.

Figure 1: Estimated number of deaths among homeless people has increased by 51% over the last six years

Deaths of homeless people (identified cases and estimated number) registered in 2013 to 2018



Source: Office for National Statistics – Death registrations

Notes:

1. Estimated numbers show error bars indicating 95% confidence interval of the estimate.
2. Figures are for deaths registered, rather than deaths occurring in each calendar year.
3. Figures for England and Wales may include deaths of non-residents.
4. The total estimated includes the identified cases plus the additional modelled cases.

Figure 2 shows sex and age breakdowns of estimated deaths of homeless people in 2018. Males accounted for the larger proportion of deaths: 641 (88%) deaths compared with 85 (12%) female deaths.

Among men, the highest proportion and number of deaths were observed among 45- to 49-year olds (117 deaths; 18% of all male deaths). Females aged 35 to 39 years had the highest number of deaths (16). Because of small overall numbers, females aged 40 to 44 years and 45 to 49 years also had similar numbers of deaths (both had 13 deaths in 2018).

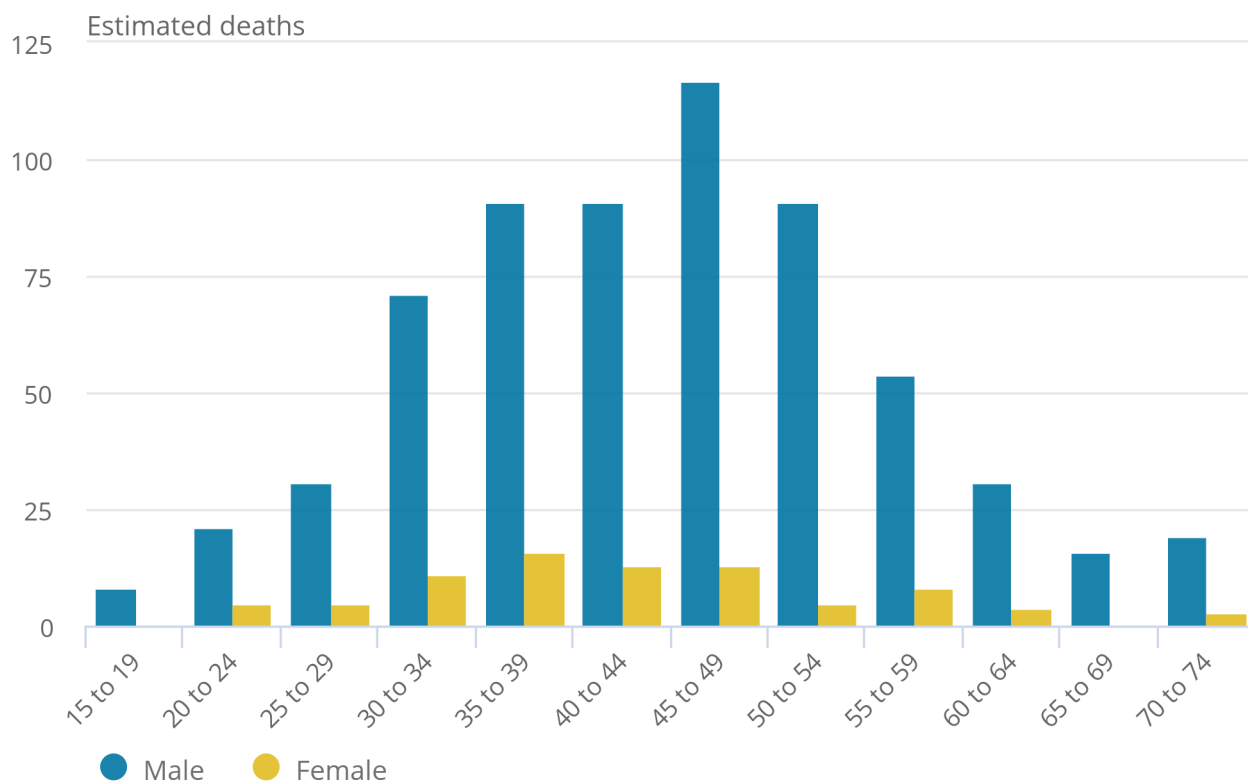
The mean age at death for identified homeless cases was 45 years for males and 43 years for females. In the general population [of England and Wales](#) in 2018, the mean age at death was 76 years for men and 81 years for women. Mean age at death is not the same as life expectancy, and further information on the mean age at death calculation can be found in section 15.7 of the [User guide to mortality statistics](#).

Figure 2: There were more than seven times as many male deaths compared with females in 2018

Deaths of homeless people (estimated), by sex and age groups, 2018

Figure 2: There were more than seven times as many male deaths compared with females in 2018

Deaths of homeless people (estimated), by sex and age groups, 2018



Source: Office for National Statistics – Death registrations

Notes:

1. Figures are for deaths registered, rather than deaths occurring in the calendar year.
2. Figures for England and Wales may include deaths of non-residents.
3. No deaths were included below the age of 15 years, while an upper age cut-off of 75 years was applied to avoid accidental inclusion of elderly people in some institutional settings.

5 . Highest numbers of deaths among homeless people were recorded in London and North West region

London and the North West had the highest numbers of deaths in 2018, with 148 (20% of the total number) and 103 (14% of the total number) estimated deaths of homeless people respectively. The estimated number of deaths in these two regions equated to a third of the total number in England and Wales. In contrast, Wales and North East had the lowest numbers of estimated deaths.

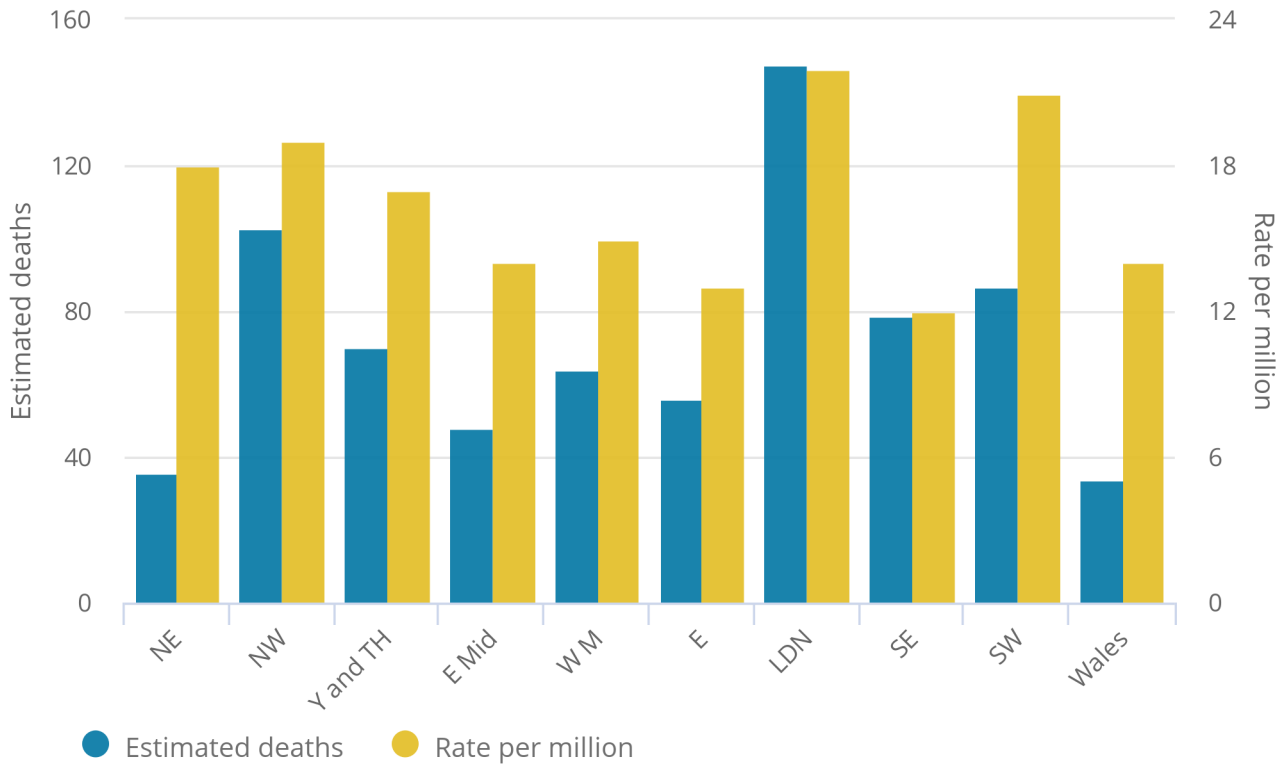
When taking into account the size of the population, a slightly different pattern emerges. London continues to have the highest rate, with 22.1 deaths per million people, however the area with the next highest rate is the South West with 21.2 deaths per million people. The area with the lowest rate was the South East with 11.9 deaths per million people.

Figure 3: One in five deaths of homeless people in 2018 were in London

Numbers and rates of deaths of homeless people (estimated) by English regions and Wales, persons, 2018

Figure 3: One in five deaths of homeless people in 2018 were in London

Numbers and rates of deaths of homeless people (estimated) by English regions and Wales, persons, 2018



Source: Office for National Statistics – Death registrations

Notes:

1. Wal - Wales, NE - North East, NW - North West, Y and TH - Yorkshire and The Humber, E Mid - East Midlands, W Mid - West Midlands, E - East of England, LDN - London, SE - South East, SW - South West.
2. Figures are for deaths registered, rather than deaths occurring in the calendar year.
3. Please note that these figures per million are not related to the number of homeless people in an area and are not age-standardised: they should not be compared with published mortality rates.

The highest estimated number of deaths of homeless people by local authority were in major urban centres

Across England and Wales, the majority of identified deaths were in urban areas (95%), consistent with data showing higher concentrations of rough sleeping in urban areas of [England](#) and [Wales](#). In 2018, deaths of homeless people were identified in 191 of 339 local authorities (LAs) in England and Wales. The LAs with the highest number of estimated deaths included:

- Birmingham (23 deaths)
- Newcastle upon Tyne (20 deaths)
- Manchester (19 deaths)
- Bristol (17 deaths)
- Westminster (17 deaths)
- Liverpool (16 deaths)

The [accompanying dataset](#) provide figures for all LAs in the relevant year(s). The table contains numbers of identified deaths, numbers of estimated deaths, and rates of estimated deaths per million total population of the LA.

6 . Drug-related deaths of homeless people have more than doubled over six years

As in the general population, homeless people die from a broad range of causes such as accidents, diseases of the liver, ischaemic heart diseases, cancers, and influenza and pneumonia. Most deaths among homeless people are captured in our National Statistics definitions of drug-related poisoning, suicide, and alcohol-specific deaths. 294 estimated deaths of homeless people in 2018 were related to drug poisoning, that is 40% of all estimated deaths (see Figure 4). Suicide and alcohol-specific causes accounted for 12% (86 deaths) and 12% (86 deaths) of estimated deaths of homeless people in 2018 respectively. Because of an overlap in definitions, some deaths classified as suicide are also counted in our definitions of drug-related deaths and alcohol-specific deaths.

Compared with the previous year, the number of deaths caused by drug poisoning increased by 55% from 190 estimated deaths in 2017. An increase in the number of deaths related to drug poisoning was also [observed in the general population during the same time period](#). For deaths caused by suicide or alcohol-specific causes, the number of deaths among homeless people has generally been consistent since 2013. Finding higher numbers of deaths among the homeless for these causes is consistent with those in [academic studies of the health and mortality of homeless individuals](#). In comparison to the general population, the [leading causes of death](#) for all those aged 15 to 74 years in 2018 were ischaemic heart diseases, lung cancer and chronic lower respiratory diseases.

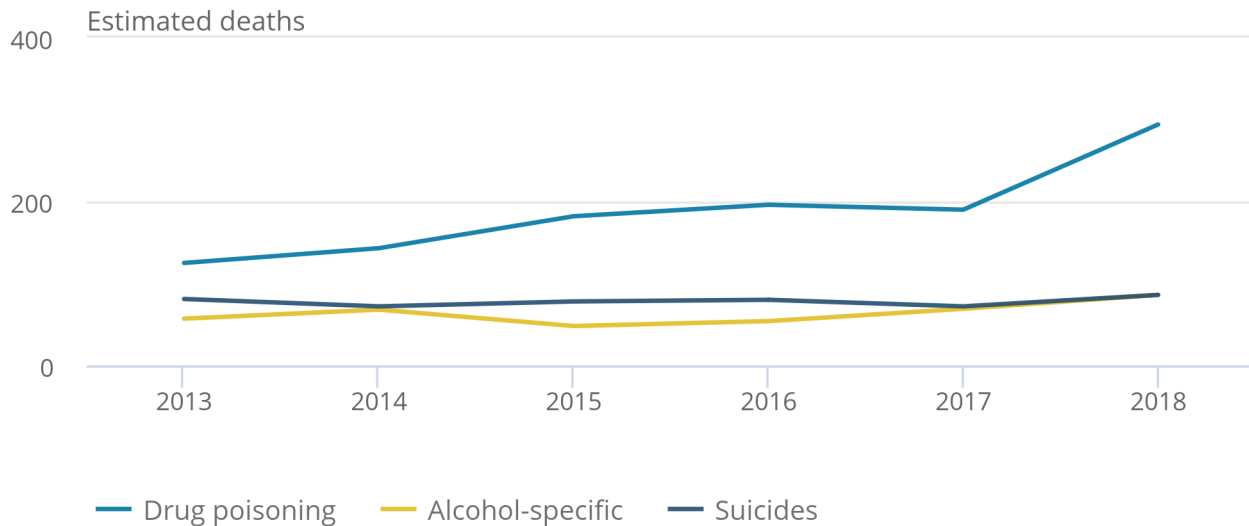
Data on numbers of homeless people who died from other causes can be found in our accompanying reference tables.

Figure 4: Drug-related deaths of homeless people increased by 55 % in one year

Deaths of homeless people (estimated) by selected causes of death, 2013 to 2018

Figure 4: Drug-related deaths of homeless people increased by 55 % in one year

Deaths of homeless people (estimated) by selected causes of death, 2013 to 2018



Source: Office for National Statistics – Death registrations

Notes:

1. Underlying cause of death is allocated using the International Classification of Diseases Tenth Revision (ICD-10). The codes used for each of the listed causes are shown in the accompanying data tables.
2. Figures are for deaths registered, rather than deaths occurring in the calendar year.
3. Figures for England and Wales may include deaths of non-residents.
4. Due to an overlap in definitions, some suicides are also included in our definitions of drug-poisoning and alcohol-specific deaths.

Looking at drug poisoning deaths in more detail, Table 1 shows the most frequently mentioned substances on the death certificates of those we were able to identify as homeless in 2018. As in the general population, [opiates were the most frequently mentioned substance](#) (131 mentions), with heroin or morphine being the most common forms (99 mentions). With data on drug poisoning, more than one substance can be mentioned in connection with each death, and in many cases alcohol is also mentioned (75 mentions).

Table 1: Drug poisoning deaths of homeless people (identified cases only) by mentioned substance 2018

Substance	Deaths
Any opiate (including unspecified opiates and excluding paracetamol compounds)	131
Heroin or Morphine	99
Methadone	34
Tramadol	3
Codeine not from compound formulation	4
Dihydrocodeine not from compound formulation	2
Cocaine	30
Amphetamine	12
Cannabis	1
Benzodiazepine	25
Alcohol	75

Source: Office for National Statistics – Death registrations

Notes

1. More than one substance can be mentioned on each death certificate. [Back to table](#)
2. Figures are for deaths registered, rather than deaths occurring in the calendar year. [Back to table](#)
3. Figures for England and Wales may include deaths of non-residents. [Back to table](#)

7 . There is little evidence of a seasonal pattern in deaths of homeless people

Deaths of homeless people lacked a clear seasonal pattern when analysed by the month of death occurrence. Figure 5 shows the average estimated number of deaths for each calendar month taking the five-year period as a whole (2013 to 2017), along with the highest and lowest number of deaths in each month. The mean estimated number of deaths per month over the whole period was 44.6 deaths. Because of registration delays, we were unable at the time of analysis to include deaths which occurred in 2018 as the result of insufficiently complete registration of such deaths.

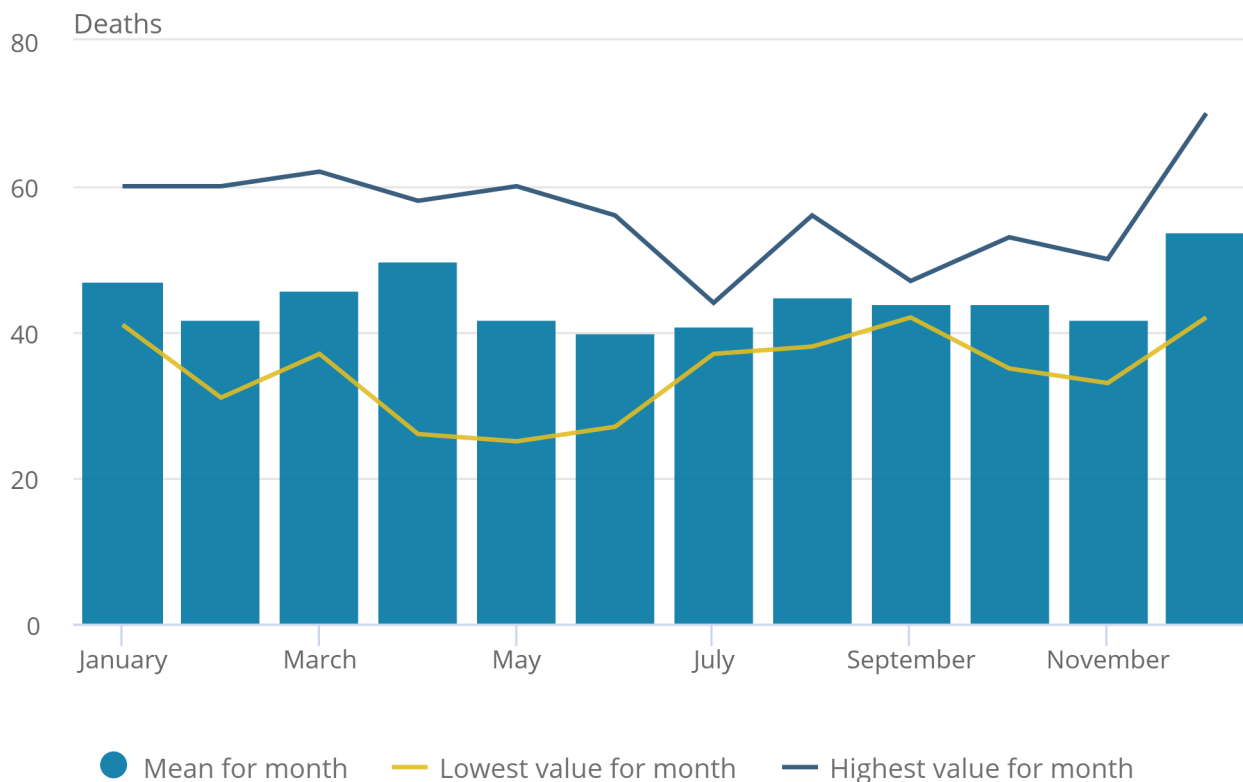
Further analysis is required to determine whether the variations over time in deaths of homeless people relate to weather, or to other factors such as the availability and purity of opiates leading to unexpected drug poisonings. The opening of temporary homeless shelters and services in winter may have a protective effect.

Figure 5: December and April are months with the highest mean estimated number of deaths of homeless people

Deaths of homeless people (estimated) by month of occurrence, persons, 2013 to 2017

Figure 5: December and April are months with the highest mean estimated number of deaths of homeless people

Deaths of homeless people (estimated) by month of occurrence, persons, 2013 to 2017



Source: Office for National Statistics – Death registrations

Notes:

1. Figures by month may not sum to the total for the year due to rounding.
2. Figures are for deaths occurring, rather than deaths registered in the calendar year or month. Figure for deaths occurring in the period 2018 are excluded in this analysis because of registration delay.
3. Figures for England and Wales may include deaths of non-residents.

8 . Registration delays

The figures presented show deaths registered in each year, rather than deaths occurring in each year. A large proportion of deaths of homeless people are investigated by a coroner to establish the cause of death in what is known as an inquest. The length of time it takes to hold an inquest creates a gap between the date of death and the date of death registration, referred to as a “registration delay”. This means that a number of deaths registered in 2018 will have occurred in earlier years, while some deaths that occurred in 2018 will not yet be included in the figures.

When looking at deaths identified as homeless in 2018 registrations: 90% were investigated by a coroner, there was a median delay of 151 days, and 58% had a date of death in 2018.

Registration delays will have relatively little impact at the England and Wales level, but can have more influence on figures for smaller geographical areas such as local authorities. See the latest report on the [impact of registration delays on mortality statistics](#) for more information.

9 . Further developing these Experimental Statistics

Over the next year we will continue to work with our users, including local authorities and charities, academics, and the General Register Office to improve the quality of this output. Comments and suggestions can be sent via email to mortality@ons.gov.uk.

We will continue to investigate ways to improve local area estimation. As described in the section, Limitations of the analysis, using the current method we are unable to estimate the number of deaths in areas where none have been identified.

In developing these Experimental Statistics, it was found that including all deaths at age 75 years or over lacking a recorded place of residence introduced a large number of false positives, mainly because of variations in the recording of addresses of care home residents at death registration. As a result, an upper age limit of 74 years was applied to the searches that rely on place of residence data. Unlike previous years, in 2018 we identified two probable deaths of homeless people aged 75 years and above. Over the coming year, we will also investigate ways to include such deaths in our estimates. For the purpose of the analysis reported in this bulletin, these two additional deaths have not been included; their inclusion does not significantly change the number of estimated deaths of homeless people in 2018.

A number of [developments are also being undertaken](#) to improve the cohesion, quality, harmonisation, accessibility and user engagement of homelessness and housing statistics. For more information, see the [GSS housing and planning statistics](#) web page.

10 . Limitations of the analysis

This release represents the second set of official figures on deaths of homeless people. The figures are produced as [Experimental Statistics](#), that is, they are in the testing phase and not yet fully developed. It is important that users are aware of the limitations of the estimates reported in this release.

When deaths are registered, there is no specific way to record whether the deceased was homeless. Local registrars do not follow any consistent practice in recording deaths of homeless people. Furthermore, it is possible that the fact that the deceased was homeless might be omitted either because of incomplete information given to the registrar, or out of consideration for the preferences of the family. It is not known whether there is any systematic difference between areas or change over time in the pattern of recording. We are working with the General Register Office, which publishes standards and guidance for local registrars, to promote clear and consistent recording of these circumstances, while respecting the sensitivities of the next of kin where they are involved.

There are no available homeless population statistics that are consistent with the definition used in this release, and therefore we are unable to produce rates of death within the homeless population itself. Instead, we present crude rates using [mid-year population estimates](#) for the entire population at national, regional and combined authority level.

Like any statistical model there is the potential for error. However, we are confident we have managed to minimise this by checking the records identified as homeless people individually. The method used provides robust but possibly conservative estimates of deaths among homeless people, so the real numbers may still be higher.

For our local authority estimates, the method used does not allow deaths to be allocated to local authorities where there were no actually identified deaths of homeless people in the relevant year. This means that a small number of deaths may have occurred in areas that are shown as having no deaths in these figures. Over the next year we will continue with a programme of work aiming to refine our statistical model.

11 . Wider context to this release

Homelessness is an important problem affecting some of the most vulnerable people in society, but which is difficult to measure as well as to solve. The government's [Rough Sleeping Strategy](#) for England sets new aims, including that deaths or serious harm of people who sleep rough should be rigorously investigated, while the Welsh [Rough Sleeping Action Plan](#) called for better monitoring and measuring of the extent of rough sleeping. The UK Statistics Authority published a [review of housing and planning statistics](#) in November 2017, and a [recently published report](#) looked at what is being done to improve homeless and rough sleeping statistics across the UK.

Previous research on deaths of homeless people

Previous UK research on deaths of homeless people has focused mainly on London or other specific cities, and has used a variety of methods. Nevertheless, past findings show some clear similarities to our figures. Reports for the charity [Crisis](#) by Keyes and Kennedy in 1992, and Grenier in 1996 studied coroners' records; the former for central London only and the latter extending a similar approach to London, Manchester and Bristol. The studies found an average age of death between 42 and 47 years. Shaw and colleagues estimated in a [paper in 1999](#) that the death rates of hostel residents were seven times greater, and those of people sleeping rough 25 times greater, than the general population.

A later [study for Crisis in 2012](#), estimated the mortality of homeless people in England for the period 2001 to 2009 using death registration data held by Office for National Statistics (ONS), by matching the recorded postcodes against known addresses of homeless projects. The study found 1,731 deaths in the nine-year period, an average of 192 deaths per year, and that drug and alcohol poisoning were among the most common causes of death. While similar, the results of this research cannot be directly compared to the figures in this release, which are based on more comprehensive searches of the data and an additional element of statistical modelling.

The [Health and Homelessness in Scotland study](#) for the Scottish Government, published in 2018, covered all households who were assessed as homeless or threatened with homelessness in Scotland between June 2001 and November 2016. While the research used a wider definition of homelessness, it is notable that the highest relative mortality risk was in the 31 to 40 years age group, while drug poisoning conditions accounted for 22.8% of male deaths and 18.0% of female deaths in the group.

Other relevant literature is described in our previous release, [Deaths of homeless people in England and Wales: 2013 to 2017](#).

12 . Quality and methodology

Model quality

The standard error (a measure of statistical uncertainty) in 2018 is marginally higher than preceding years, suggesting that the latest estimate may be slightly less reliable. Despite this, underlying quality measures showed that the model used (Chao) to estimate the number of deaths among homeless people provided the most robust estimate when compared to a wide range of alternative models.

Compared with previous years, in 2018 there is a wider gap between numbers of identified and estimated deaths. We are working as part of the development of our Experimental Statistics to understand this.

The [Deaths of homeless people 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