Homeless Deaths 2017 and 2018
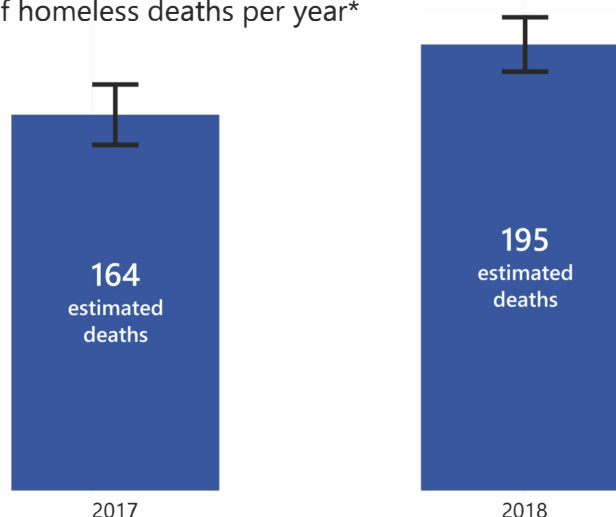
Published on 5 February 2020

This statistical report includes estimates of the number of homeless deaths in Scotland during 2017 and 2018. It includes breakdowns by sex and age-group, council area, and cause of death. These are **Experimental Statistics** and remain under development. Users should refer to the limitations section of this report before interpreting these statistics.

Preserving the past | Recording the present | Informing the future

Homeless deaths in 2018 estimated at 195

There were an estimated 195 deaths of people experiencing homelessness registered in Scotland in 2018. This was an increase of 19% on the estimate of 164 in 2017.

* Error bars are 95% confidence intervals around the estimates.

Number of homeless deaths per year*

	164 estimated deaths	195 estimated deaths
	2017	2018

Homeless death rates varied by local authority

Glasgow City and Aberdeen City had the highest rates of homeless deaths per million population with rates of 100.5 and 67.8 in 2018.

Shetland Islands also had a very high rate (111.8). But as this was based on a very small number of identified deaths, this result should be treated with caution.

Four local authorities (Angus, East Renfrewshire, Moray and Scottish Borders) had no identified homeless deaths in 2018. So these authorities had a zero death rate.

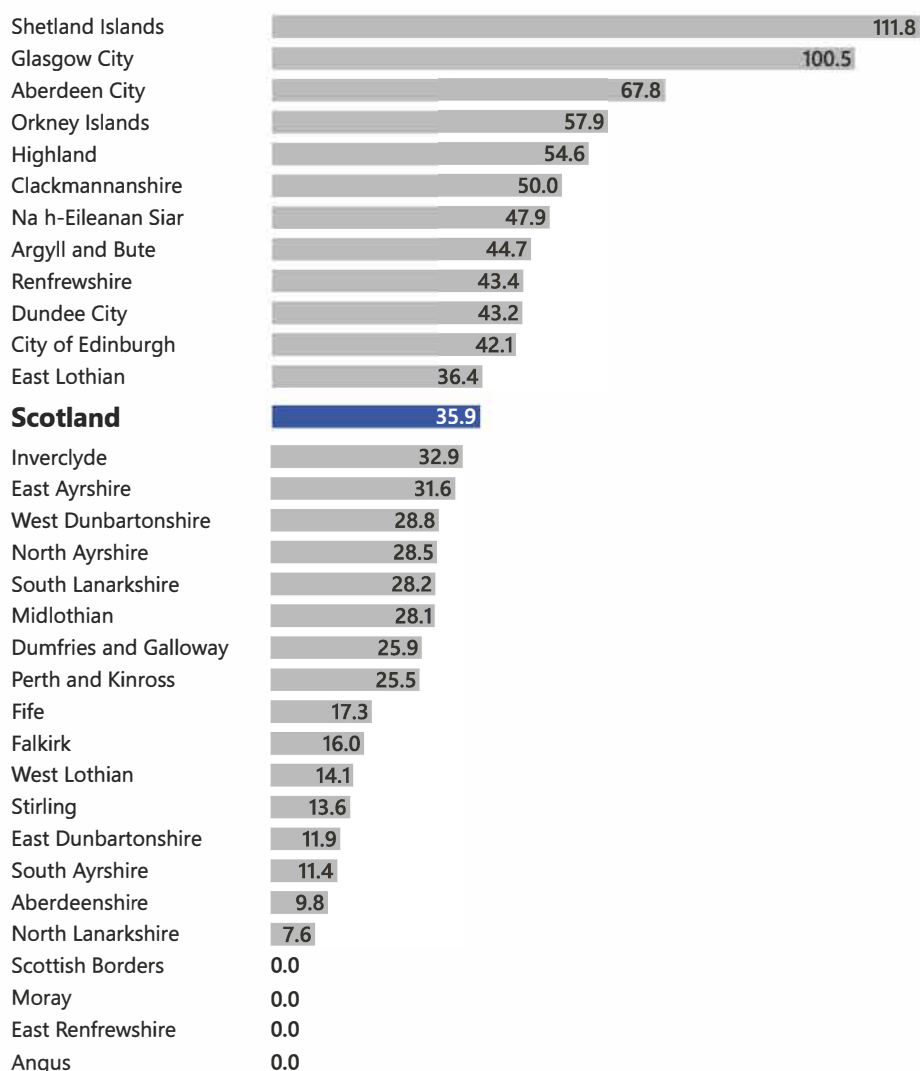### Death rate by local authority
Deaths per million people

Local authority	Rate
Shetland Islands	111.8
Glasgow City	100.5
Aberdeen City	67.8
Orkney Islands	57.9
Highland	54.6
Clackmannanshire	50.0
Na h-Eileanan Siar	47.9
Argyll and Bute	44.7
Renfrewshire	43.4
Dundee City	43.2
City of Edinburgh	42.1
East Lothian	36.4
Scotland	**35.9**
Inverclyde	32.9
East Ayrshire	31.6
West Dunbartonshire	28.8
North Ayrshire	28.5
South Lanarkshire	28.2
Midlothian	28.1
Dumfries and Galloway	25.9
Perth and Kinross	25.5
Fife	17.3
Falkirk	16.0
West Lothian	14.1
Stirling	13.6
East Dunbartonshire	11.9
South Ayrshire	11.4
Aberdeenshire	9.8
North Lanarkshire	7.6
Scottish Borders	0.0
Moray	0.0
East Renfrewshire	0.0
Angus	0.0

Table of Contents

1.   Main Points

- There were an estimated 195 deaths of people experiencing homelessness registered in Scotland in 2018, an increase of 19% on the estimate of 164 in 2017.
- Scotland had the highest rate of homeless deaths of all GB countries in 2018 with a rate of 35.9 per million population compared to 16.8 in England and 14.5 in Wales.
- In 2018 Glasgow City (100.5) and Aberdeen City (67.8) had the highest homeless death rates per million population[1].
- More than half of homeless deaths in 2018 were drug-related (53%, 104).
- Around three quarters of homeless deaths were males (74% of the total in 2017 and 79% in 2018).
- The mean age at death was 43 for females and 44 for males.

2.   Introduction

This report provides **experimental statistics** on deaths of people experiencing homelessness in Scotland. Figures are provided for deaths registered in 2017 and 2018, with breakdowns by sex and age-group, local authority and cause of death. Experimental Statistics are those that are in the testing phase and not yet fully developed. They have not yet been assessed against the rigorous quality standards of National Statistics. They will remain experimental statistics for a period of evaluation of their suitability and quality and feedback is invited from users and

---

[1] Shetland Islands had a homeless death rate of 111.8 per million population in 2018 but this was based on a very small number of deaths so should be interpreted with caution

stakeholders. When interpreting the statistics, users should be aware of their limitations and read the methodology section for details on how they have been developed.

Deaths of homeless people were identified from death registration records, and a statistical method called capture-recapture modelling was used to estimate the likely number of additional deaths which we were unable to identify as homeless using the information available. Figures in this report are shown for both identified deaths and estimated deaths. Refer to the methodology section for further explanation of the difference between the two figures.

These statistics include people who were in temporary accommodation at the time of their death as well as those who were sleeping rough.

Why do we use a model to estimate homeless deaths?

Homeless deaths are difficult to count and we know that we will miss many based on the sources of information we have. The model we use tries to account for and estimate how many we might have missed. For more details see the box entitled "Limitations of these Statistics"

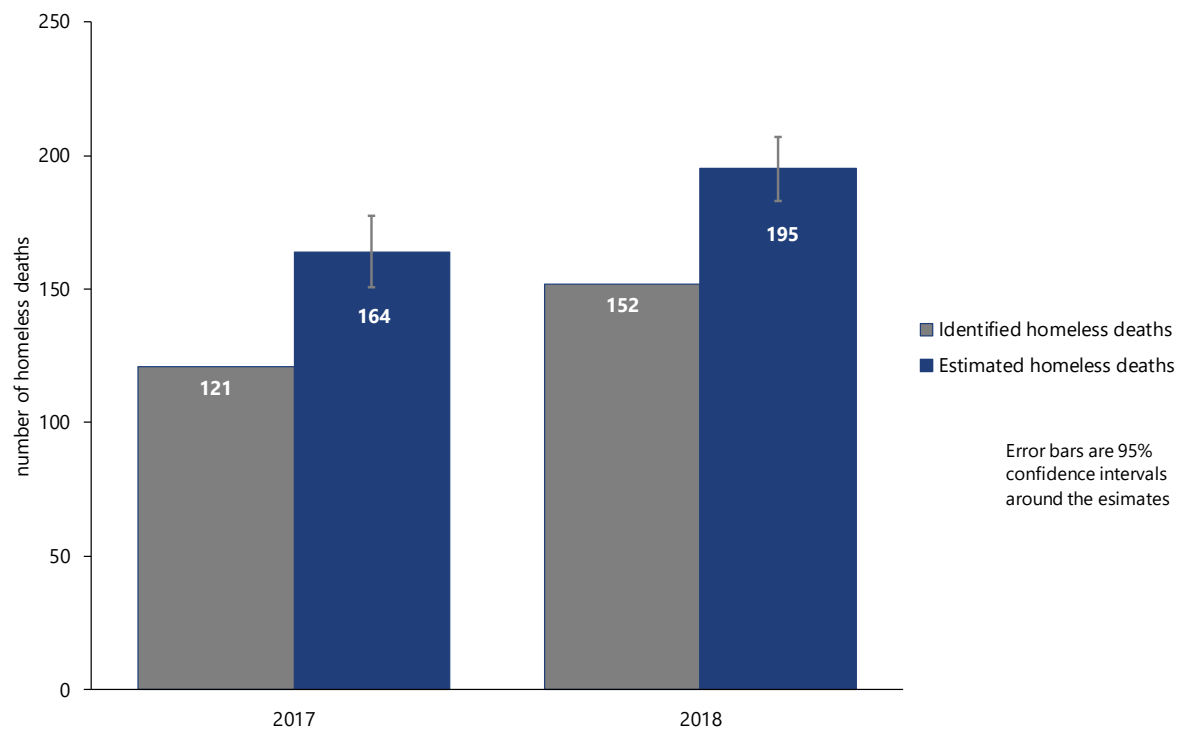### 3.   Homeless deaths in Scotland

There were an estimated 195 deaths of people experiencing homelessness registered in Scotland in 2018, an increase of 19% on the estimate of 164 in 2017.

Of the total 195 estimated deaths in 2018, 152 were identified from death registration records. The additional 43 deaths were estimated using the statistical model. The 95% confidence interval around the estimated figure of 195 was +/- 11.9 meaning that the true number of homeless deaths in 2018 is likely to be within the range of 183 to 207.

The equivalent figures for 2017 were 164 estimated deaths, of which 121 were identified. The 95% confidence interval around the estimated figure of 164 was +/- 13.2 meaning that the true number of homeless deaths in 2017 is likely to be within the range of 151 to 177.

The estimated death rate per million population was 30.3 in 2017, rising to 35.9 in 2018.

Figure 1 Identified and estimated homeless deaths in Scotland, 2017 and 2018

Identified homeless deaths
Estimated homeless deaths

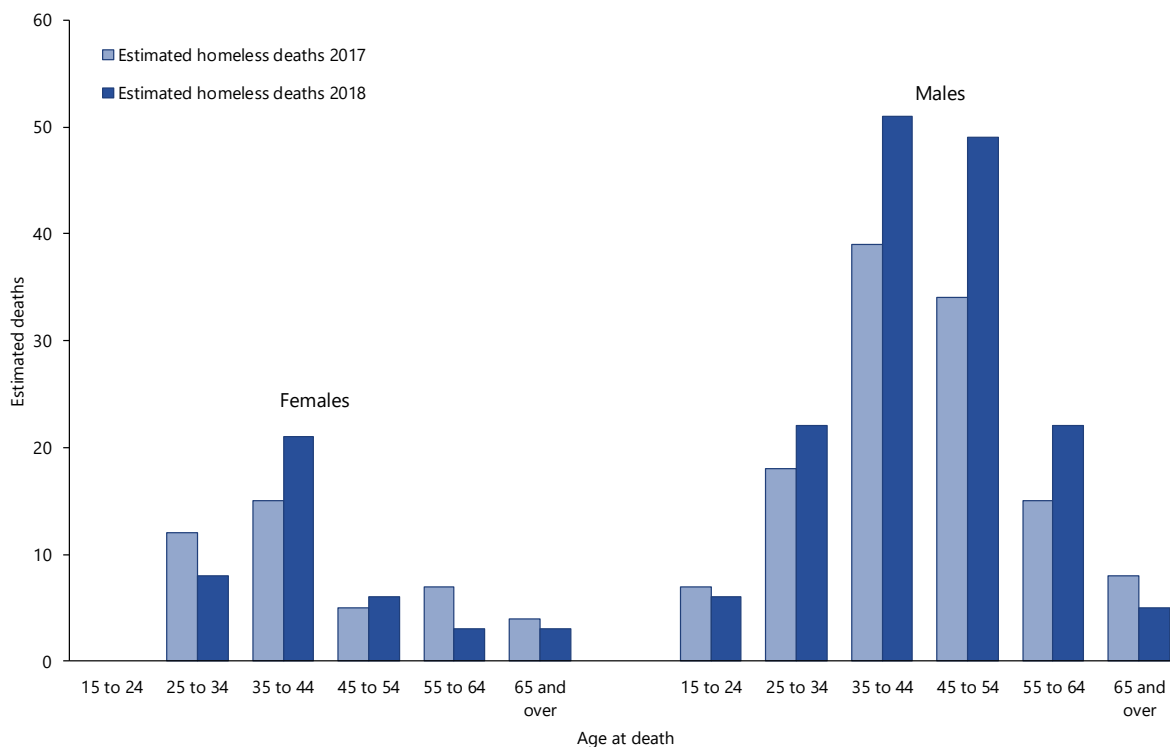Error bars are 95% confidence intervals around the esimates

4.   Homeless deaths by sex and age-group

The majority of homeless deaths were males – around three quarters in each year. The most common age groups were 35 to 44 and 45 to 54 among males and 35 to 44 among females In both 2017 and 2018.

The average age at death was 43 for females and 44 for males.

Figure 2 Estimated Homeless deaths by sex and age group, 2017 and 2018
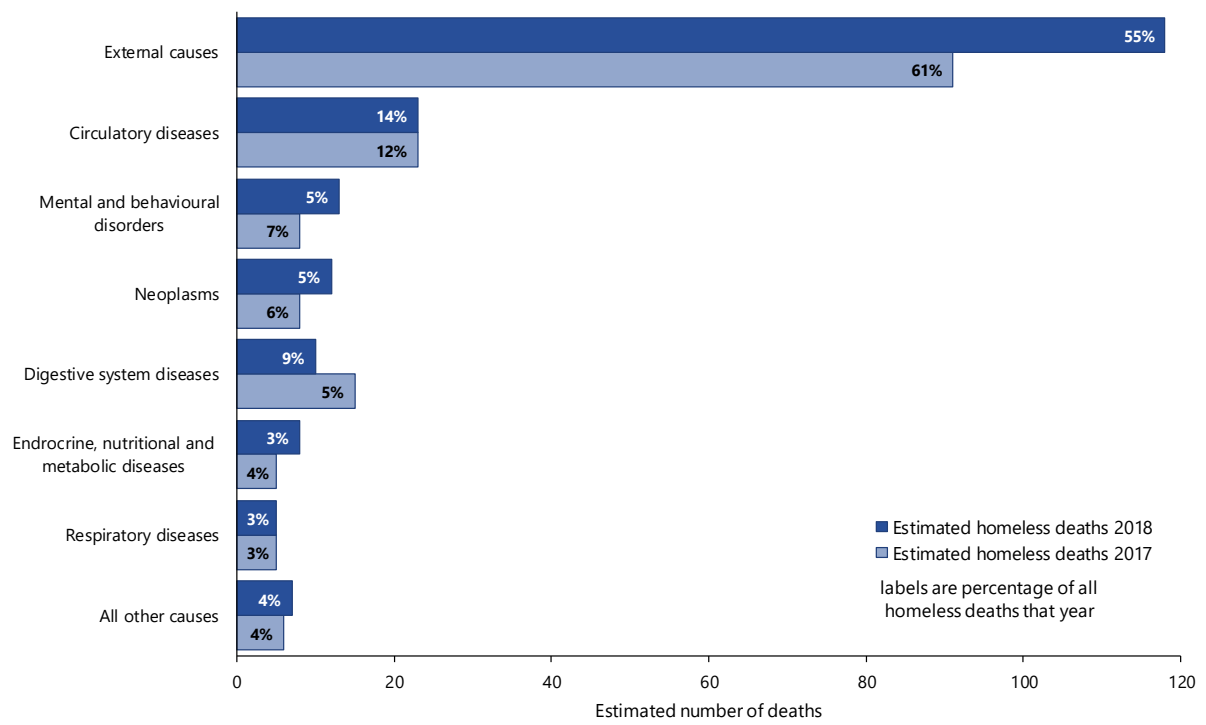

5.   Homeless deaths by Local Authority

Glasgow City and Aberdeen City had the highest rates of homeless deaths per million population with rates of 100.5 and 67.8 in 2018. Shetland Islands also had a very high rate (111.8) but as this was based on a very small number of identified deaths, this result should be treated with caution.

A number of local authorities had no identified homeless deaths in one of the years examined. Only one authority (East Renfrewshire) had no identified homeless deaths in either year.
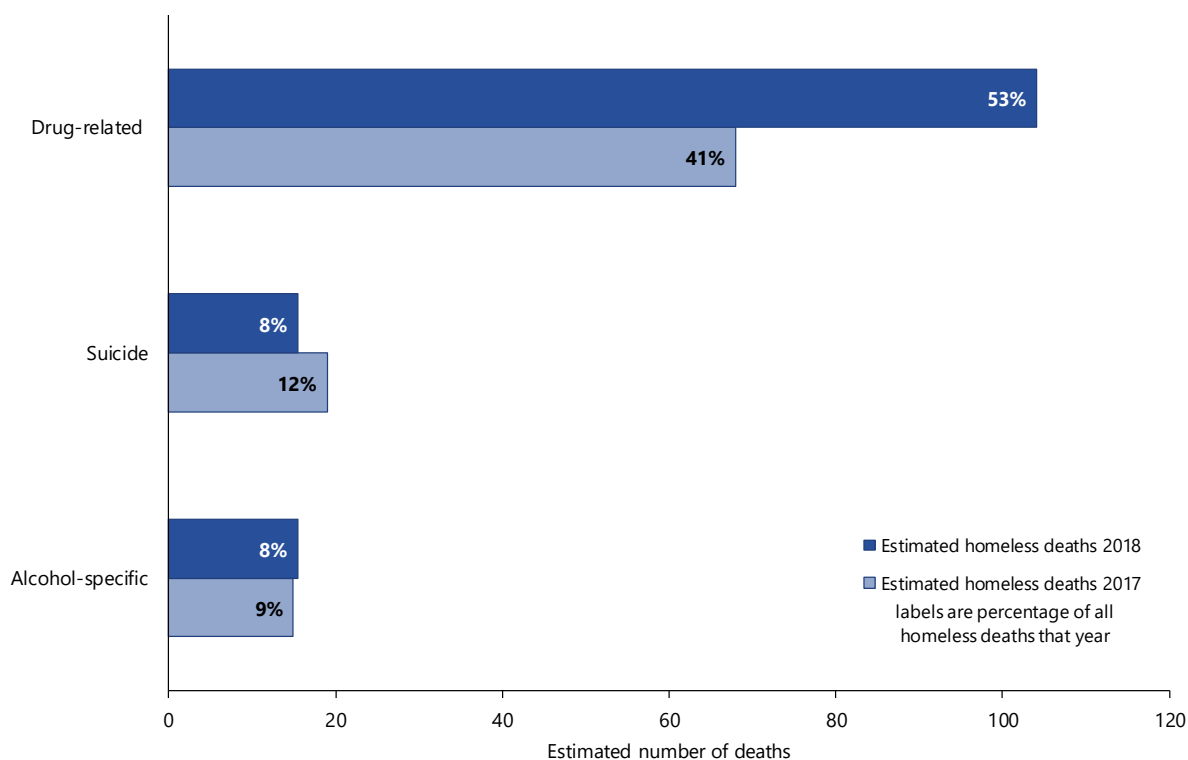
Figure 3 shows death rates for both 2017 and 2018 and it is notable that several local authorities rates differ considerably between the two years. Given the high variability of these results, users should treat these figures with caution, and conclusions about the direction of a trend within a local authority should not be drawn.

Figure 3 Estimated Homeless deaths by Local Authority, 2017 and 2018

6. Homeless deaths by cause

When cause of death was broken down by ICD-10 chapter[2], the most common causes of homeless deaths in 2018 were:

- XX External causes of morbidity and mortality (including accidents, suicides and assaults) – 61%
- IX Diseases of the circulatory system (including heart disease and stroke) – 12%
- V Mental and behavioural disorders – 7%
- II Neoplasms (cancers) – 6%

---

[2] Causes of death are coded according to the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).

Figure 4 Estimated homeless deaths by cause of death (ICD-10 Chapter), 2017 and 2018

Drug-related deaths[3] accounted for more than half (53%, 104) of homeless deaths in 2018 with suicide[4] and alcohol-specific deaths[5] each accounting for 8 percent (figure 5).

Figure 5 Estimated homeless deaths by selected causes of death[1], 2017 and 2018

[1] It should be noted that there are overlaps between suicides and drug-related deaths whereby a death can be counted as both suicide and drug-related (for example intentional poisoning). The categories in figure 5 should therefore not be added together as some deaths may appear in more than one category.

7. Comparisons with GB countries

Scotland had the highest rate of homeless deaths of all GB countries in 2018. The Scottish rate was 35.9 deaths per million population, more than twice the rate in England (16.8) and Wales (14.5).
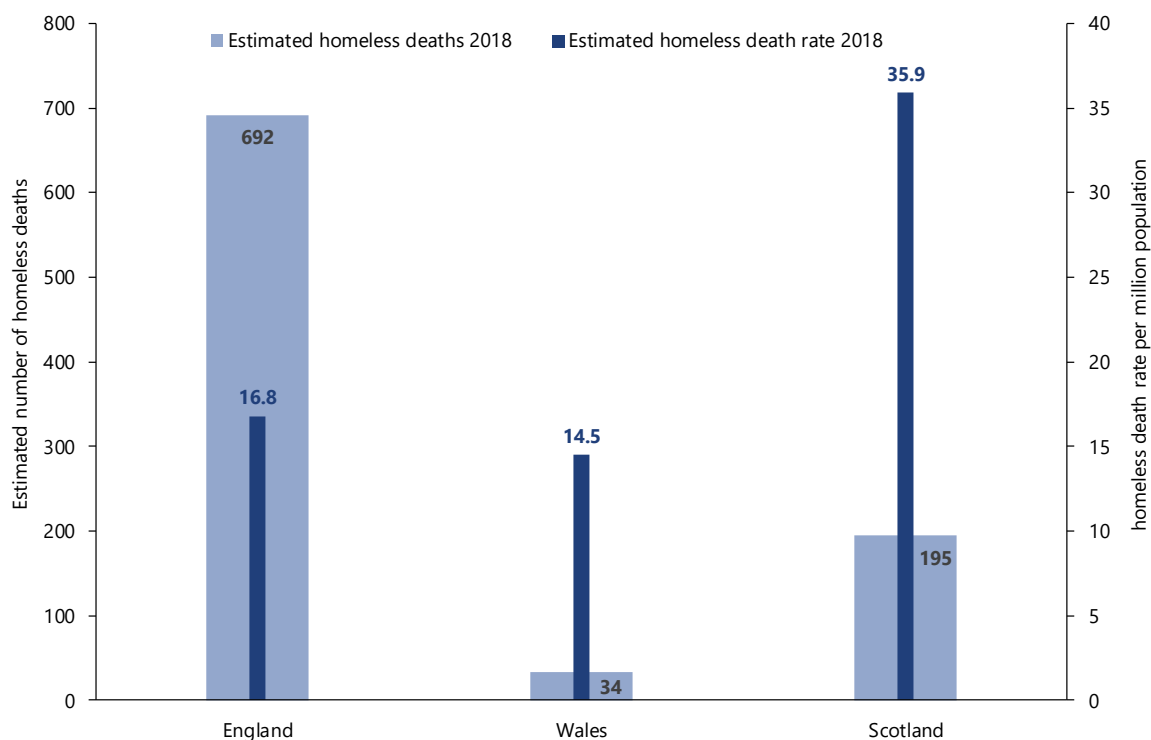
The methodology used to produce the Scottish estimates is consistent with that used by the Office for National Statistics (ONS) to produce the England and Wales estimates. Although some of the data sources used to identify homeless deaths differ slightly , the estimates are considered to be broadly comparable.

---

[3] See Drug-related deaths in Scotland 2018 for definition
[4] See Probable suicides section of NRS website for definition
[5] See Alcohol deaths section of NRS website for definition

Figure 6 Estimated homeless deaths by country, 2018

8.   Methodology

Identifying whether a person was homeless when they died is not straightforward using the information recorded at death registration. There is no specific question on the death certificate asking if a person was homeless at the time of death.

To compensate for this lack of information we searched death registration records for any evidence that the deceased may have been homeless at the time of their death. We used a number of search strategies (detailed below) to identify these deaths and then applied a statistical method called capture-recapture modelling to estimate the likely number of additional deaths which were not identified via these searches.

Search one – Place of residence

The *place of residence* on the death registration record was searched for terms such as "no fixed abode", "shelter", "homeless", "rough sleeper" or "no address known". Additionally we compiled a list of addresses which are used by local authorities to provide temporary accommodation for homeless people. We matched the place of residence against these addresses and identified any which matched.

Search two – Place of death

The *place of death* on the death registration record was searched for terms such as "no fixed abode", "shelter", "homeless", "rough sleeper" or "no address known". We matched the place of death against the list of temporary accommodation addresses mentioned in search one and identified any which matched.

Search three – Institution codes

Death registration records contain an institution code where the person died in a hospital, care home, hostel or other type of institution. Institution codes which specified a homeless hostel or shelter were listed and any deaths which contained one of these codes were identified.

Search four – Hospital deaths

Where the place of death was recorded as being in a hospital and there was no information provided for the place of residence, the deceased was identified as potentially homeless. This was an attempt to identify homeless people who may have been found unwell on the street and taken to hospital where they subsequently died.

As it is possible for people (particularly elderly people) to spend a long time in hospital prior to their death, we excluded any deaths where the deceased had been in hospital for more than a year.

Search five – Registrar notes

The registrar notes section on the death registration record were searched for terms such as "no fixed abode", "shelter", "homeless", "rough sleeper" or "no address known".

Quality Assurance

All records identified by one or more of these searches were checked individually to prevent errors. For example, the search for the term "shelter" identified some records where the deceased lived in a sheltered housing complex. These records were excluded.

For searches one and two, where we found a match with one of the addresses being used as temporary accommodation by a local authority, we asked them to confirm that the address was being used as temporary homeless accommodation at the date of death.

A lower age cut-off of 15 and an upper age cut-off of 75 was applied to the data. This decision was driven by evidence that deaths of elderly people who had spent time in an institutional setting for some time prior to their death, and for whom no prior place of residence was recorded, could have erroneously been included

How we calculated the estimates

The estimation was carried out using the Rcapture package in the R programming language. The calculations estimate the likely size of an unknown closed population based on multiple captures (searches). The model looks at how many deaths were identified in each of the five searches and the degree of overlap between searches (it is possible for a death to appear in more than one search). It then provides an estimate of the likely number of deaths which were not picked up in these searches to give an estimate of the total number of homeless deaths.

Based on the nature of the data and the diagnostic and goodness-of-fit statistics produced by the package, the Chao model was selected out of several alternatives. This is a robust but conservative model, so the figures produced should be taken as the lowest probable estimates and it is likely that the true number may be higher.

Definitions of homelessness

The identification of homeless people for the purposes of these statistics is not based on an existing definition of homelessness but is based on our ability to identify such individuals in the death registration records. The records we have identified are mainly those people using emergency accommodation such as homeless shelters, hostels and temporary homeless accommodation at the time of their death. In some instances we have been able to identify those who are rough sleeping, but we expect there are more which we have not been able to identify from the death registration records.

Comparisons with ONS

These statistics are broadly comparable with those published by ONS for England and Wales. The same methodology and statistical model have been applied. Although the death registration systems in Scotland, England and Wales are similar, there were some cases where it was not possible to mirror the five searches which ONS carried out on their death registration data. For example, ONS used information received from coroners for one of their searches, but due to the different system in Scotland, this information wasn't available. Despite these differences, it is felt that the statistics are broadly comparable.

The ONS report includes estimates of homeless deaths caused by drug poisoning. This is based on the wider definition of drug deaths and is not the same definition of drug-related deaths that we have used in this report.

Improving our methodology

These statistics are experimental and the methodology is still under development. We recognise that there may be better methods to estimate homeless deaths or better sources of information to feed into our current methodology. We are publishing them at an early stage to involve users and stakeholders in assessing their suitability and quality.

We welcome any feedback from users on ways in which the methodology or data sources may be developed to improve the quality of these statistics in future years.

Limitations of these statistics

These statistics are experimental statistics and represent our best estimate of the number of deaths of people experiencing homelessness, but there are limitations which users should be aware of.

We rely on information which is provided to registrars by the informant when a death is registered. The informant is usually a family member or a friend, but in some cases the informant may be a police officer, a social worker, a funeral director or other person. In these cases, the informant may not have all of the information needed to determine whether the person was homeless at the time of their death. Even when the informant is a family member, they may not have been in touch with the deceased for some time and may be unaware of their circumstances, or they may not wish the fact that their relative was homeless to appear on the death certificate.

Although we have carried out multiple searches of our data sources to identify homeless people, there are a number of groups who we may have missed, or underestimated, in this process.

A small percentage of people present to their local authority as homeless but never take up an offer of homeless accommodation. They may be able to stay with friends or relatives until permanent accommodation is found for them. They are unlikely to be identified in the searches we have carried out.

A number of people who are sleeping rough may not present themselves as homeless to their local authority and are therefore not registered as homeless. If they die while sleeping rough, they may be picked up by our searches but only if the informant provides this information to the registrar when registering the death.

The capture recapture estimation technique we have used attempts to address this undercount, but the method used is known to produce conservative estimates - the actual number of homeless deaths may be higher.

9.   Related statistics

- [Deaths of Homeless people in England and Wales](#) is published by the Office for National Statistics.
- [Homelessness in Scotland](#) statistics are published by Scottish Government and updated bi-annually. They contain statistics on homelessness applications, assessments and outcomes. They also provide data on the number of households in temporary accommodation.
- [Births, Deaths and Other Vital Events, Quarterly Figures](#) are published by National Records of Scotland and contain statistics on deaths for the most recent quarter.
- [Vital Events Reference Tables](#) are published by National Records of Scotland and contain annual statistics on deaths.

10.   Notes on statistical publications

Experimental Statistics

The statistics in this publication are experimental statistics. They are in the testing phase and are not yet fully developed. They have not yet been assessed against the rigorous quality standards of National Statistics.

The United Kingdom Statistics Authority (UKSA) designates statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the UKSA website).
National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

Information on background and source data

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc can be found in the About this Publication document that is published alongside this publication on the NRS website.

National Records of Scotland

We, the National Records of Scotland, are a non-ministerial department of the devolved Scottish Administration. Our aim is to provide relevant and reliable information, analysis and advice that meets the needs of government, business and the people of Scotland. We do this as follows:

Preserving the past – We look after Scotland's national archives so that they are available for current and future generations, and we make available important information for family history.

Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.

Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

You can get other detailed statistics that we have produced from the Statistics section of our website. Scottish Census statistics are available on the Scotland's Census website.

We also provide information about future publications on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government ScotStat website.

You can also follow us on twitter @NatRecordsScot

Enquiries and suggestions

Please contact our Statistics Customer Services if you need any further information.
Email: statisticscustomerservices@nrscotland.gov.uk

If you have comments or suggestions that would help us improve our standards of service, please contact:

Alan Ferrier, Senior Statistician
National Records of Scotland
Room 1/2/12, Ladywell House
Ladywell Road, Edinburgh
EH12 7TF
Phone: 0131 314 4530
Email: alan.ferrier@nrscotland.gov.uk