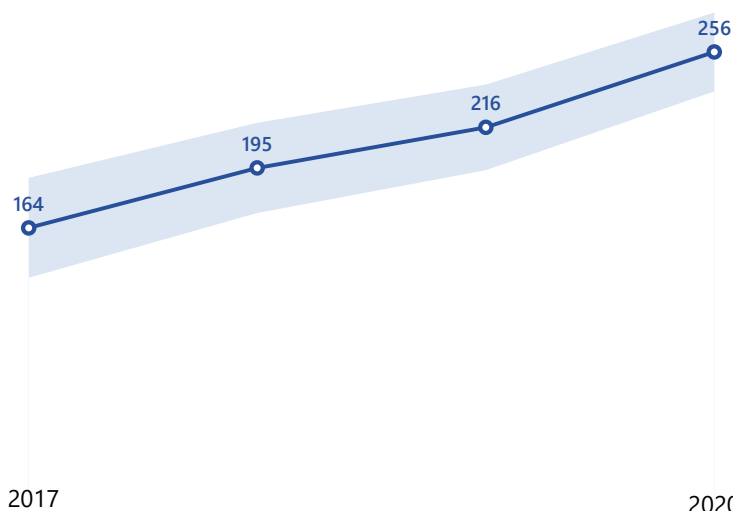# Homeless Deaths
2020

This statistical report includes estimates of the number of homeless deaths registered in Scotland during 2020. 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

In 2020, there were an estimated 256 homeless deaths

The estimated number of people dying while experiencing homelessness has risen consistently over the past three years.

There were 215 deaths which were identified through death registration data, with an additional 41 calculated by a statistical model.
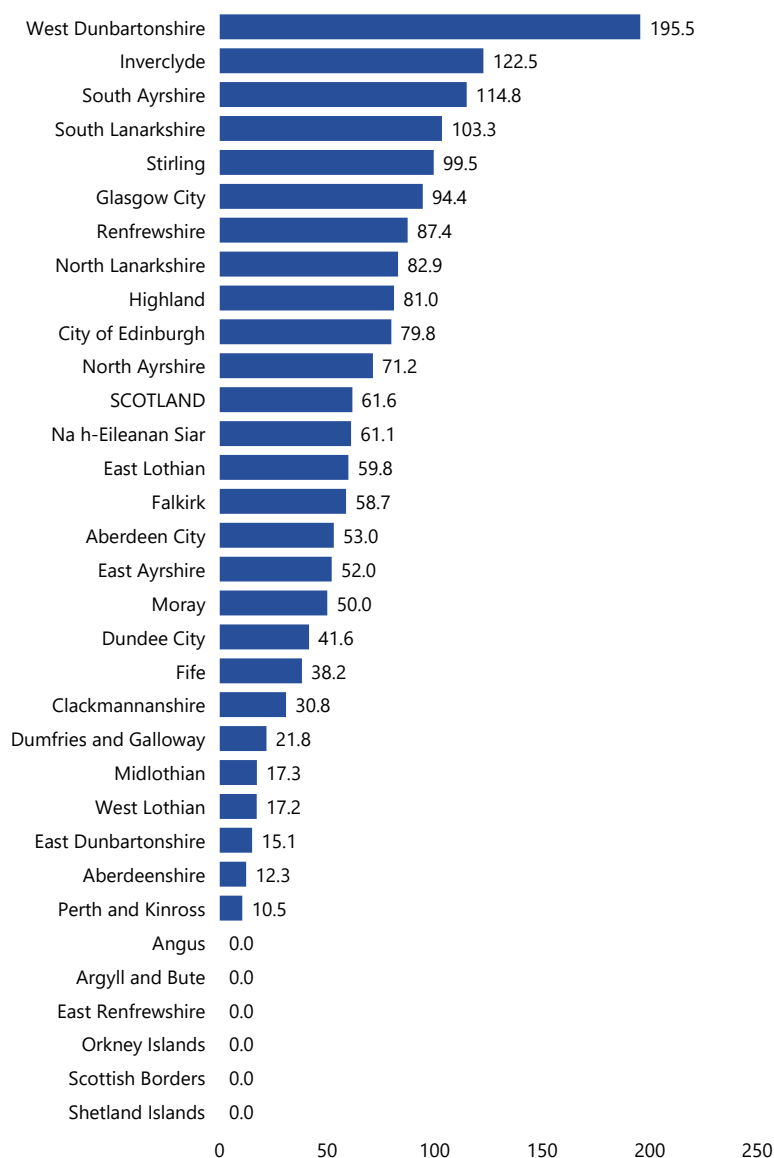
Homeless death rates varied by local authority

West Dunbartonshire (195.5), Inverclyde (122.5) and South Ayrshire (114.8) had the highest rates of homeless deaths per million population. Many of the areas with high rates were in the west of the country.

Six local authorities had no homeless deaths last year. These were Angus, Argyll and Bute, East Renfrewshire, Orkney Islands, Scottish Borders and Shetland Islands

Estimated homeless deaths , 2017-2020

Year	Deaths
2017	164
	195
	216
2020	256

Estimated deaths per million people aged 15-74

Local authority	Rate
West Dunbartonshire	195.5
Inverclyde	122.5
South Ayrshire	114.8
South Lanarkshire	103.3
Stirling	99.5
Glasgow City	94.4
Renfrewshire	87.4
North Lanarkshire	82.9
Highland	81.0
City of Edinburgh	79.8
North Ayrshire	71.2
SCOTLAND	61.6
Na h-Eileanan Siar	61.1
East Lothian	59.8
Falkirk	58.7
Aberdeen City	53.0
East Ayrshire	52.0
Moray	50.0
Dundee City	41.6
Fife	38.2
Clackmannanshire	30.8
Dumfries and Galloway	21.8
Midlothian	17.3
West Lothian	17.2
East Dunbartonshire	15.1
Aberdeenshire	12.3
Perth and Kinross	10.5
Angus	0.0
Argyll and Bute	0.0
East Renfrewshire	0.0
Orkney Islands	0.0
Scottish Borders	0.0
Shetland Islands	0.0

Table of Contents

1. Main Points

- There were an estimated 256 deaths of people experiencing homelessness registered in Scotland in 2020.
- In 2020, West Dunbartonshire (196), Inverclyde (123) and South Ayrshire (115) had the highest homeless death rates per million population aged 15-74.
- 77% of homeless deaths were male and 23% were female.
- Over half of deaths of people experiencing homelessness were drug related (151 deaths, 59% of the total number of deaths).
- In the latest comparable figures from 2019, Scotland had the highest rate of homeless deaths in Great Britain with a rate of 52 per million population aged 15-74 compared to 18 in England and 14 in Wales.

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

2. Introduction

This report provides **experimental statistics** on deaths of people experiencing homelessness in Scotland. Figures are provided for deaths registered in 2020, 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 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.

Why do we use a model to estimate homeless deaths?

Homeless deaths are difficult to count and we know that we will miss some 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 256 deaths of people experiencing homelessness in Scotland in 2020. This is an increase of 40 deaths on the previous estimate in 2019.

Of the total 256 deaths estimated in 2020:

- 215 were identified from death registration records.
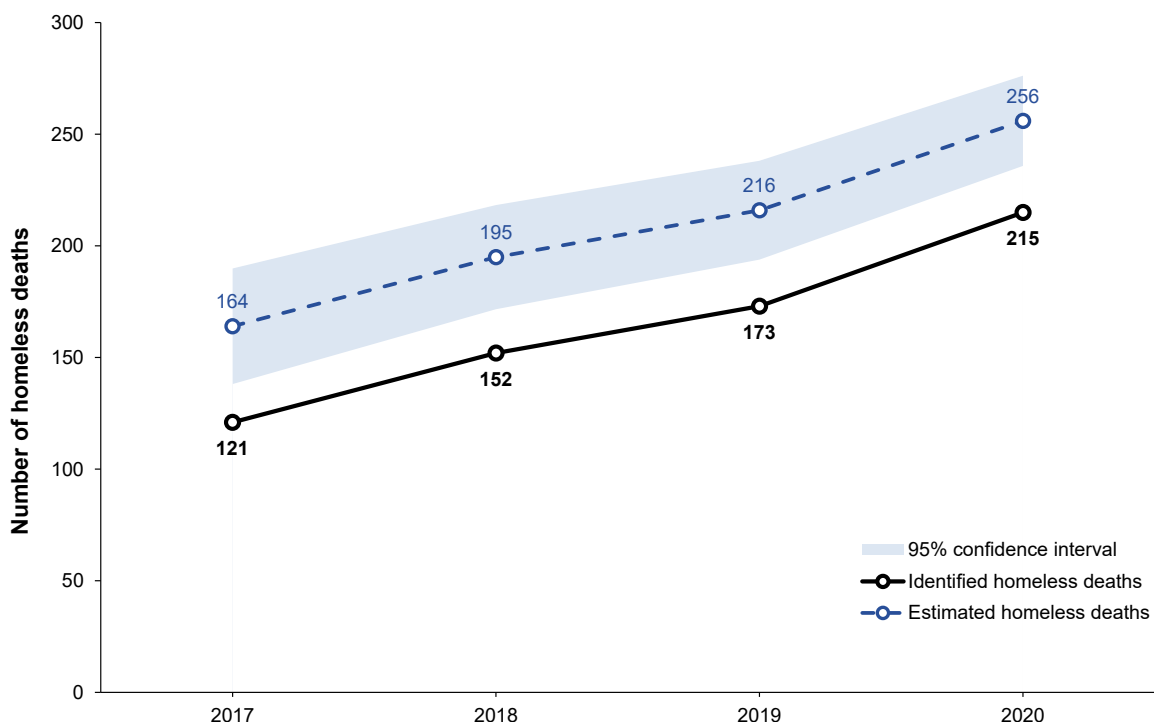- The additional 41 deaths were estimated using the statistical model.

The 95% confidence interval around the estimated figure of 256 was +/- 20.2 meaning the true number of homeless deaths is likely to be within the range of 235.8 to 276.2.

The number of households in temporary accommodation rose in 2020 compared to 2019, making it easier to identify these people as homeless using the methodology we use. More information about this can be found in the Scottish Government's publication on Homelessness in 2020/21.

The percentage of additional deaths estimated by the statistical model has decreased over the four years of estimates (from 36% in 2017 to 19% in 2020). This suggests that homeless deaths are more easily identified by our methodology now than they were in the first year of publication.

Note: Confidence intervals for previous years' estimates have been revised due to a processing error.

Figure 1: Identified and estimated homeless deaths in Scotland, 2020
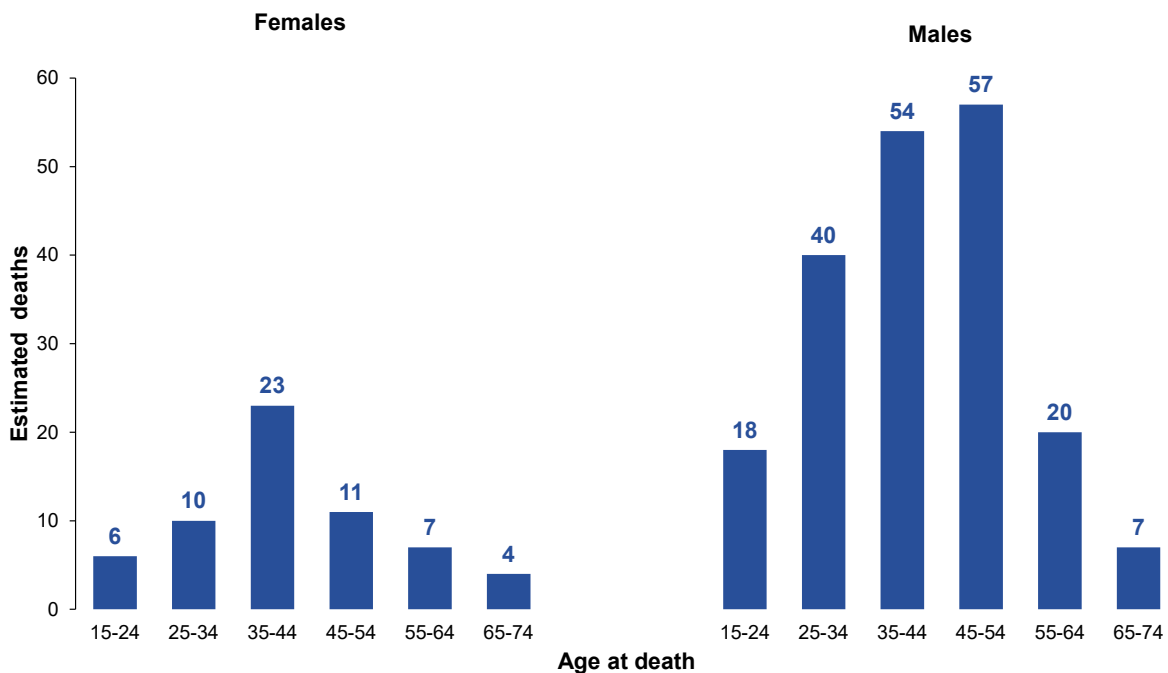
4. Homeless deaths by sex and age group

The majority of homeless deaths in 2020 were males.

- 197 deaths (77%) were males
- 60 deaths (23%) were females

The most common age groups (of those listed below in Figure 2) were different for males and females. The most common male age group was 45-54 and for females it was 35-44. For males, 57% of deaths were under age 45 compared to 65% for females.

Figure 2: Estimated homeless deaths by sex and age group in Scotland, 2020
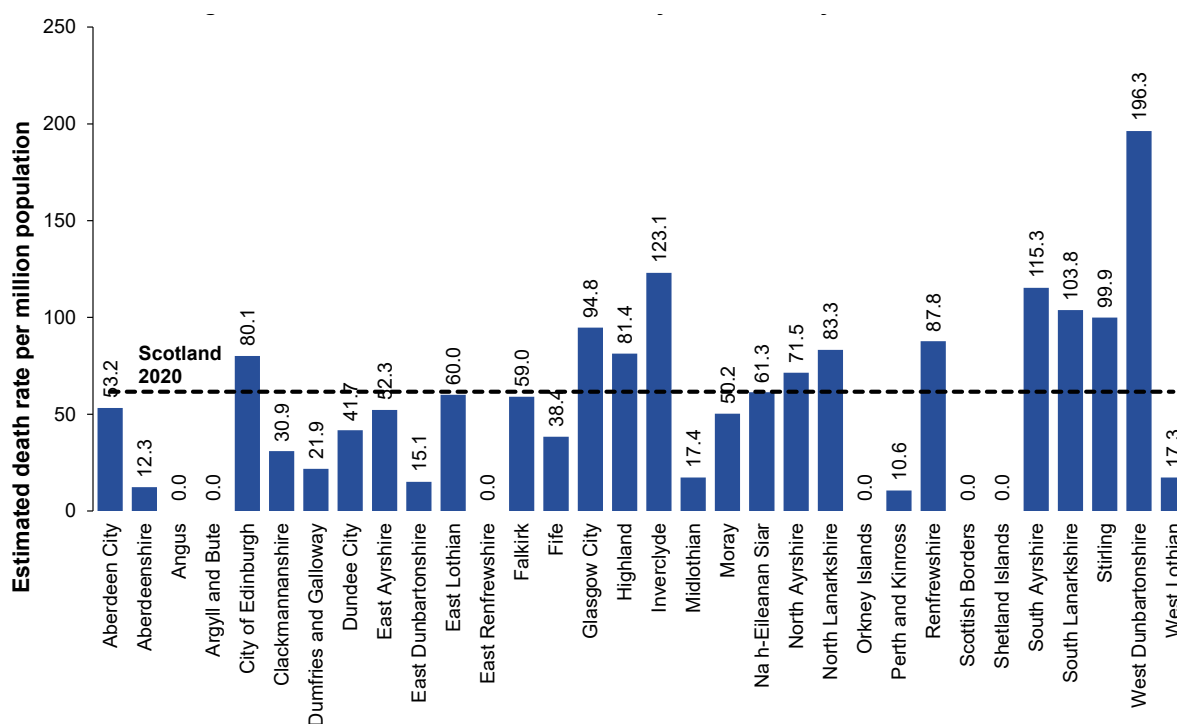

5. Homeless deaths by Local Authority

West Dunbartonshire, Inverclyde and South Ayrshire had the highest rates of homeless deaths per million population with rates of 196 and 123 and 115 in 2020.

Six local authorities had no identified homeless deaths in 2020:

- Angus
- Argyll and Bute
- East Renfrewshire
- Orkney Islands
- Scottish Borders
- Shetland Islands

Scottish Borders has had no identified homeless deaths for three consecutive years. East Renfrewshire has had no identified homeless deaths for four consecutive years.

Figure 3: Estimated homeless deaths by local authority in Scotland, 2020

It is important to note that deaths do not necessarily represent deaths of homeless applicants to the council that they died in. Deaths are assigned to a local authority based on the address of usual residence or (if no usual residence recorded) the place of death. If a local authority has provided someone with temporary accommodation in a neighbouring authority, the death will be assigned to that local authority area.

6. Homeless deaths by cause

When cause of death was broken down by ICD-10 chapter[1], the most common cause of homeless deaths in 2020 were:

- XX - External causes of morbidity and mortality (including drug-related deaths, accidents, suicides and assaults) (71%)
- IX - Diseases of the circulatory system (including heart disease and stroke) (8%)
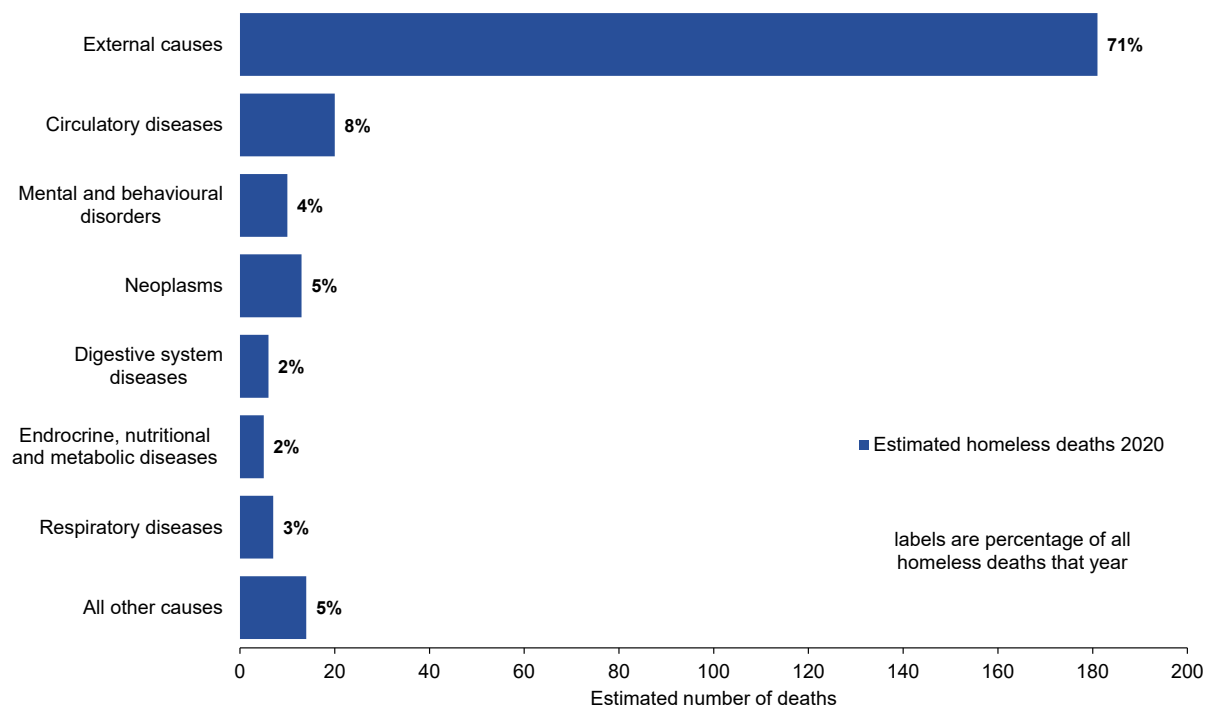- II - Neoplasms (cancers) (5%)

The number of homeless deaths from external causes increased again in 2020, from 151 to 181. This is driven by an increase in drug related deaths in the past year.

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[1] Causes of death are coded according to International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).
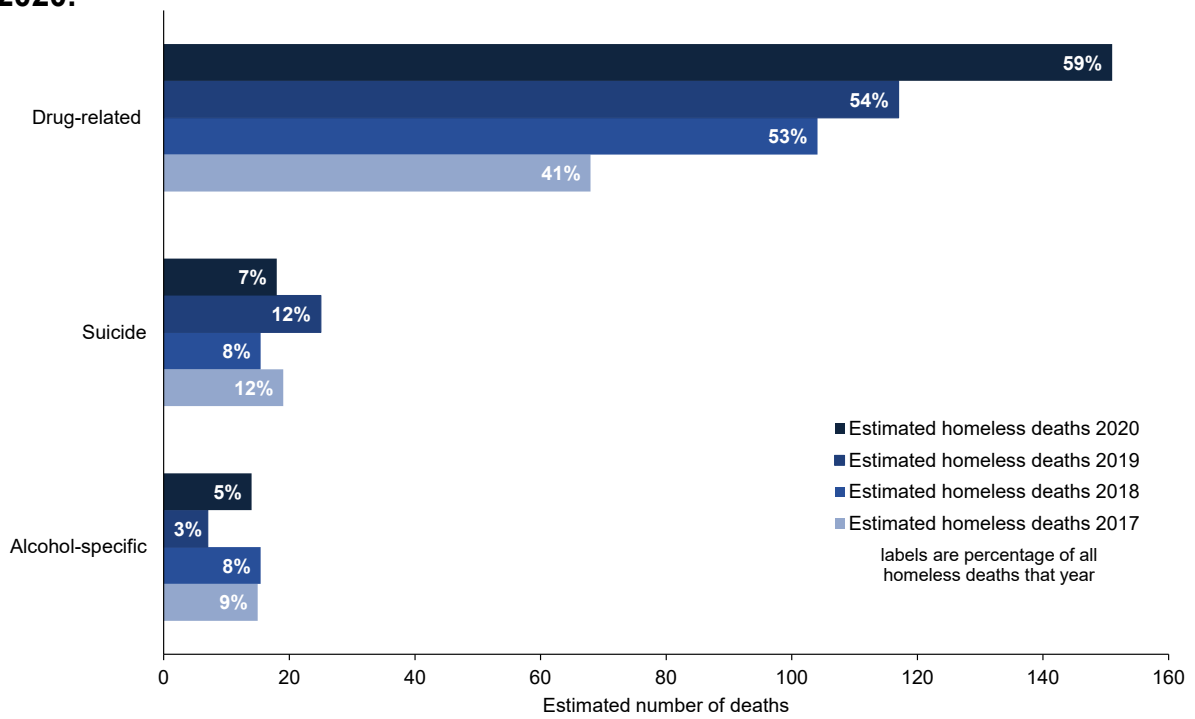
There were no recorded deaths of people experiencing homelessness where COVID-19 was the underlying cause of death in 2020.

Figure 4: Estimated homeless deaths by cause of death in Scotland, 2020

Looking more specifically at selected causes of death, over half of deaths of people experiencing homelessness were drug-related (59%, 151 deaths). Suicide accounted for 7% and alcohol-specific deaths 5% It is important to highlight that there can be overlaps between suicides and drug-related deaths as a death can be counted as both. For this reason, when interpreting these statistics the two categories should not be added together as some deaths may appear in more than one category.

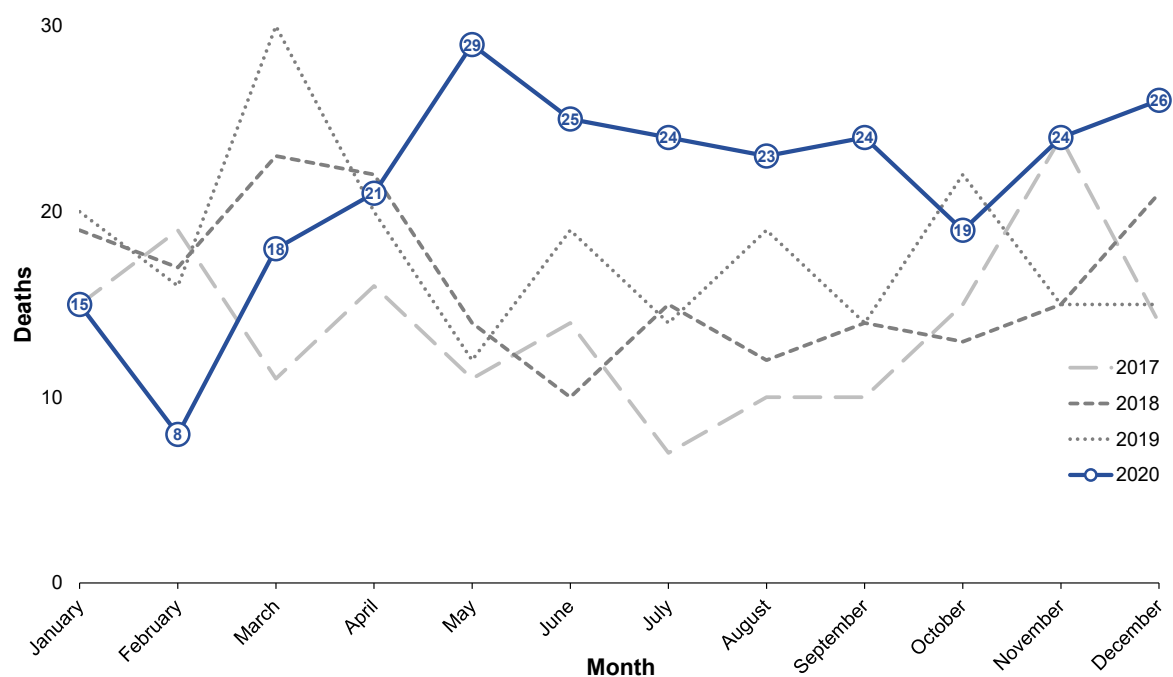**Figure 5: Estimated homeless deaths by selected cause of death[1] in Scotland, 2020.**

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

7. Monthly death registrations

Figure 6: Estimated homeless death registrations by month

The number of deaths of people experiencing homelessness was consistently higher than in previous years between May and September 2020. May 2020 had the highest estimated number of homeless death registrations last year of any month (29), with February having the lowest (8).

8. Comparisons with GB countries

Note: England and Wales figures for 2020 are yet to be released. This analysis has therefore not been updated from that included in the 2019 report.
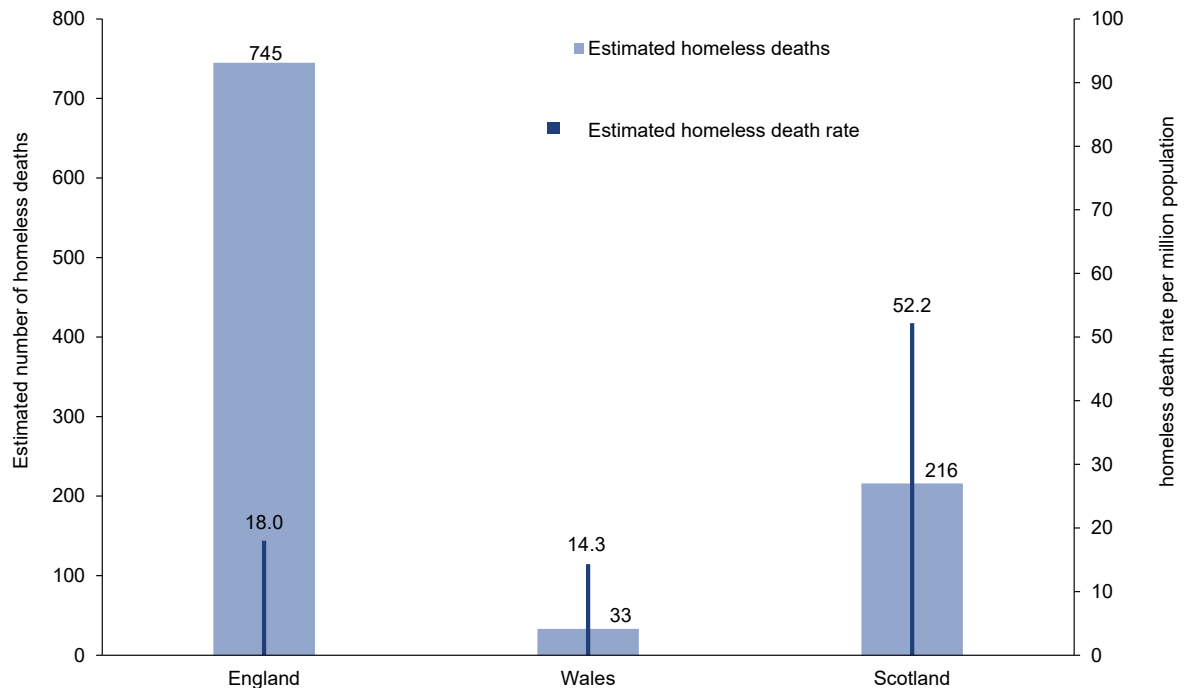
The methodology used to produce the Scottish estimates is consistent with that used by the Office for National Statistics (ONS) to produce the England and Wales estimates. Although some of the data sources used to identify homeless deaths differ slightly, the estimates are considered to be broadly comparable.

Differences in legislation between countries may impact on the comparisons. The criteria for receiving temporary accommodation in Scotland differs to that in England and Wales and therefore may impact on the likelihood of a death being identified.

In the latest comparable year (2019), Scotland had the highest homeless death rate when compared to England and Wales. The Scottish rate was 52.2 per million population aged 15-74, around three times the rate in England (18.0) and Wales

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(14.3). The Scottish homeless death rate has been the highest in 2017, 2018 and 2019.

Figure 7: Estimated homeless deaths by country, most recent year (2019)

9. 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.

The Homelessness in Scotland: 2019 to 2020 publication notes that care needs to be taken when comparing homelessness statistics across the 4 countries in the UK due to differences in collection methods and legislation. It is therefore likely that some of these differences will impact on the comparability of the estimates of homeless deaths across countries.

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.

10. 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.
- [Deaths from Specific Causes](#) are published by National Records of Scotland and contain annual statistics on suicides, alcohol and drug-related deaths.

11. 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 metadata that is published alongside this publication on the NRS website.

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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](#).

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Enquiries and suggestions

Please get in touch if you need any further information, or have any suggestions for improvement.

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