

# Deaths from suicide and injury of undetermined intent in Derby City and Derbyshire County

[Deaths registered in 2019]

This short report provides information on deaths registered in 2019 from suicide and injury of undetermined intent in people living in Derby City and Derbyshire County




Public Health Knowledge  
& Intelligence Team

# Deaths from suicide and injury of undetermined intent in Derby City and Derbyshire County

2020 Report

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This report is a resource to support professionals working to prevent suicide. If you are looking for personal support, we would invite you to make a GP appointment, ring NHS 111 or if you feel it is an emergency to contact 999. Alternatively, the Samaritans offer a listening service 116 123.

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# 1 INTRODUCTION

The aim of this report is to present the information from descriptive analysis of the most recent data on deaths from suicide and injury of undetermined intent in Derby City and Derbyshire County. It is intended to describe the patterns for the deaths registered in 2019, including benchmarking against national trends, and to inform further analysis for the Derbyshire Self-harm and Suicide Prevention Partnership Forum. Previous reports are available on the Derbyshire Observatory.<sup>1</sup>

The report focusses on data for residents of Derby City and Derbyshire County. Derby City is a Unitary Authority covering an urban area with an estimated population of 257,302<sup>2</sup>. The city has areas that experience significant levels of socioeconomic deprivation and poorer health outcomes compared with East Midlands and England<sup>3</sup>. Derbyshire County extends over a large rural area, with a population of 802,694<sup>2</sup> resident in a mix of market towns, villages, and more rural areas. Many of the indicators of health for Derbyshire County are similar to the East Midlands and England averages, although there is notable variation between the districts, with areas such as Bolsover and Chesterfield experiencing higher levels of socioeconomic deprivation. Further descriptions of the populations and health needs are available in the JSNAs and Health Profiles.<sup>4</sup>

# 2 METHODOLOGY

This report describes the data for Derby City and Derbyshire County residents pertaining to deaths from suicide and injury of undetermined intent which were registered in 2019. If the death of a resident occurred outside of the residential area, it will still be included. The data within this report are sourced from the Primary Care Mortality Database supplied by NHS Digital under a Data Sharing Agreement<sup>5</sup>.

The data analysis for this report follows the methodology of previous reports and aligns with the methodology used by the Office of National Statistics. The Primary Care Mortality Database data is extracted from death certificates. In cases of suicide and injury of undetermined intent there is often a delay between the date of death and date of registration due to the length and timing of Coroners' Inquest; this report is specifically for deaths registered in 2019. The categorisation of a 'Death from Suicide and Injury of Undetermined Intent' is where the primary cause of death is due to one of the following codes from ICD10 X60-84 (age 10+ only), Y10-Y34 (age 15+ only). Only deaths of injury of undetermined intent in adults age 15 years and over are included, deaths from undetermined intent for 10-14 year olds are not categorised as suicide as it is not clear if it is appropriate to assume the intention of the cause of death. Age standardised rates have been calculated using 10+ years as the denominator and are presented per 100,000 population.

Deaths from injury of undetermined intent are included in this dataset where intent in the circumstances of the death was unclear. Furthermore, coroners may return narrative verdicts, and it is noted that where these are 'hard-to-code', the death may be registered as an accidental death and not included in the count of deaths from suicide and injury of undetermined intent.

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<sup>1</sup> See: <https://observatory.derbyshire.gov.uk/life-expectancy-and/suicides/>

<sup>2</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>

<sup>3</sup> <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>

<sup>4</sup> For Derby City, see <https://info4derby.derby.gov.uk/>; for Derbyshire, see <https://observatory.derbyshire.gov.uk/jsna/>

<sup>5</sup> <https://digital.nhs.uk/services/primary-care-mortality-database>

## 3 DATA

### 3.1 Numbers of deaths from suicide and injury of undetermined intent

The number of deaths by suicide and injury of undetermined intent registered in 2019 totalled 20 for Derby City and 77 for Derbyshire County. Table 1 shows the number of deaths for both areas by the underlying cause of death. For deaths registered in 2019, 13% were deaths from injury of undetermined intent, where the intent in the circumstances of the death was unclear.

**Table 1: Numbers of deaths registered in 2019**

Area	Number of deaths from suicide	Number of deaths from injury of undetermined intent	Total number of deaths from suicide and injury of undetermined intent
Derby City	14	6	20
Derbyshire County	70	7	77
<b>Total</b>	<b>84 (87%)</b>	<b>13 (13%)</b>	<b>97 (100%)</b>

Source: Primary Care Mortality Database

The number of deaths by suicide and injury of undetermined intent is monitored annually. Table 2 shows how the total numbers of deaths registered in 2019 for Derbyshire County and Derby City compares with previous years. The number of deaths registered in 2019 was higher than the preceding three years for Derbyshire County, whereas the number of deaths registered in 2019 for Derby City was slightly lower than the previous year.

**Table 2: Numbers of deaths from suicide and injury of undetermined intent by year of registration**

Area	2012	2013	2014**	2015	2016	2017	2018	2019
<b>Derby City</b>	20	20	25	19	18	10	23	20
<b>Derbyshire County</b>	56	46	86	83	55	49	73	77
<b>Total</b>	<b>76</b>	<b>66</b>	<b>111</b>	<b>102</b>	<b>73</b>	<b>59</b>	<b>96</b>	<b>97</b>

Source: Primary Care Mortality Database

\*\*ONS recorded 26 for Derby City and 87 for Derbyshire County in 2014

The number of deaths recorded as suicide and injury of undetermined intent is reported by the year in which the death was registered. Table 3 presents the data comparing the year the death occurred with the year that the death was registered. The majority (56%) of deaths registered in 2019 were for deaths that occurred in 2018.

**Table 3: Comparison between the year that the death was registered, with the year that death occurred, for deaths from suicide and injury of undetermined intent**

Year Death Registered	Total number of deaths	Percentage of Deaths by the Year Death Occurred						
		2013	2014	2015	2016	2017	2018	2019
<b>2017</b>	59			5%	59%	36%		
<b>2018</b>	95			3%	13%	47%	36%	
<b>2019</b>	<b>97</b>	*		*	*	<b>11%</b>	<b>56%</b>	<b>28%</b>

Source: Primary Care Mortality Database

\* Suppressed to prevent disclosure through differencing

In Derbyshire County 55% of deaths recorded as suicide or injury of undetermined intent registered in 2019 occurred in 2018. In Derby City this figure was slightly higher at 60%, see Table 4.

**Table 4: Deaths registered in 2019 in Derby City and Derbyshire County by year of death**

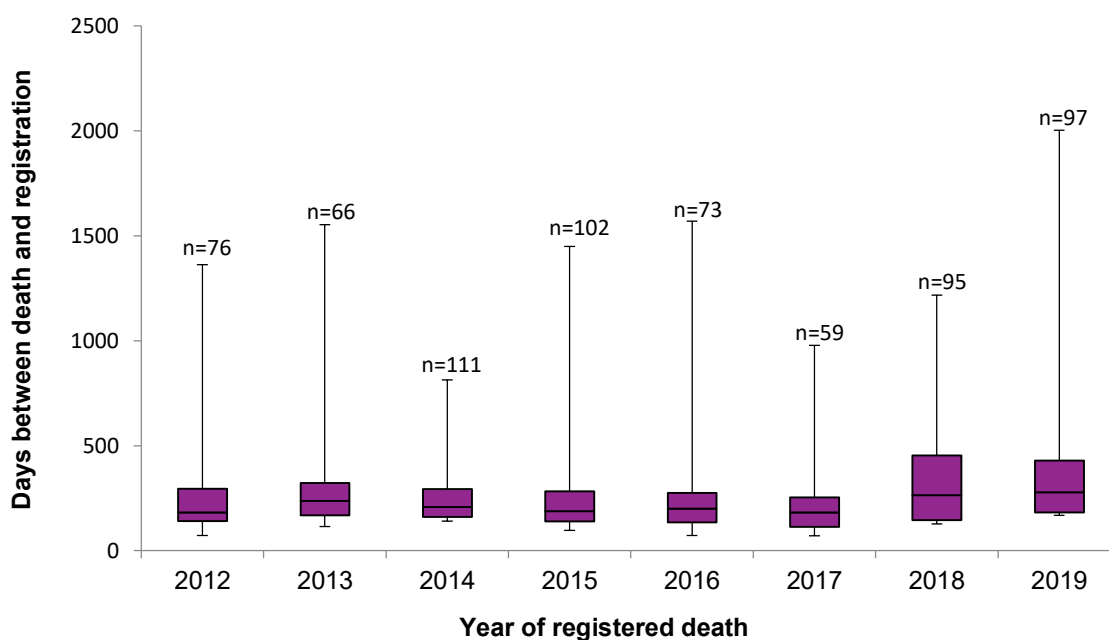
Year of Death	Derby City	Derbyshire County
2013		*
2014		
2015		*
2016	*	*
2017	20%	9%
2018	60%	55%
2019	*	32%

Source: Primary Care Mortality Database

\* Suppressed to prevent disclosure through differencing

For deaths recorded as suicide and injury of undetermined intent registered in 2019, the median time difference between date of death and date of registration was 293 days (Figure 1). This is similar compared to the median number of days in previous years, and there have been no significant changes in the time lag between date of death and date of death registration observed in this time period.

**Figure 1: Time interval in number of days between the date of death and date of death registration for deaths recorded as suicide and injury of undetermined intent**

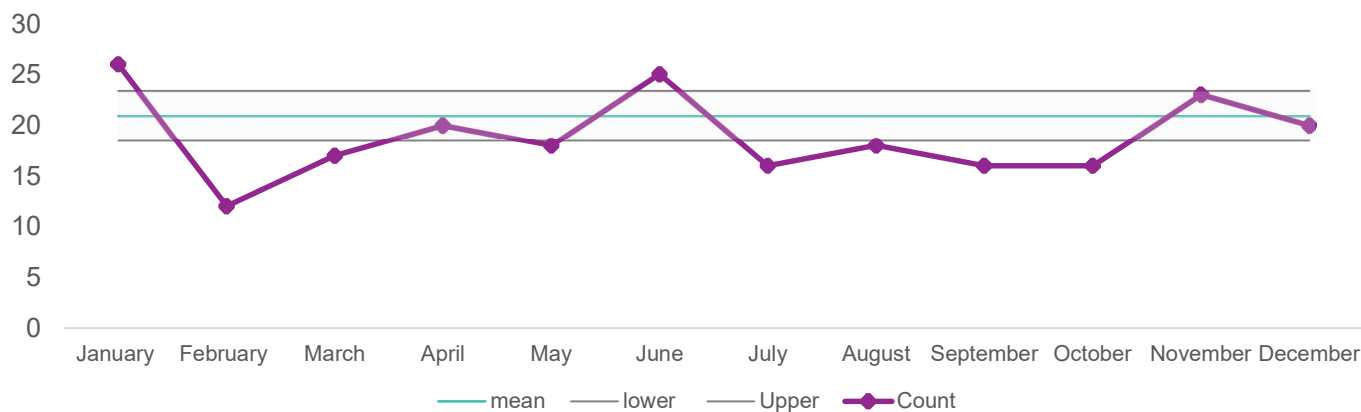


Horizontal line shows median time, box shows interquartile range, vertical lines show range

Source: Primary Care Mortality Database

An analysis by date of death (based on 3 year pooled 2017-19 registered deaths) demonstrates when the count of deaths for a month differ from the mean, see Figure 2. If the count is outside of the grey shaded area, it differs significantly from the mean. January and June had a significantly higher count of deaths compared to the mean. However, as numbers are small there is likely to be a large amount of variation so care must be taken when interpreting this data.

**Figure 2: Month when death occurred for deaths registered in 2017, 2018 and 2019 from suicide and injury of undetermined intent**



### 3.2 Rates of deaths from suicide and injury of undetermined intent

The age-standardised rates of deaths from suicide and injury of undetermined intent are presented in Table 5 and displayed in Figure 3. These age-standardised rates allow comparison over time and between areas. The rates are presented as three-year rolling averages to allow for the yearly fluctuations associated with the relatively small numbers of deaths compared to the population size. The error bars in Figure 3 show the 95% confidence intervals around each data point. As these are small numbers, particularly for Derby City, even with pooled year data there is an inherent level of uncertainty, such that caution should be taken in interpreting trends.

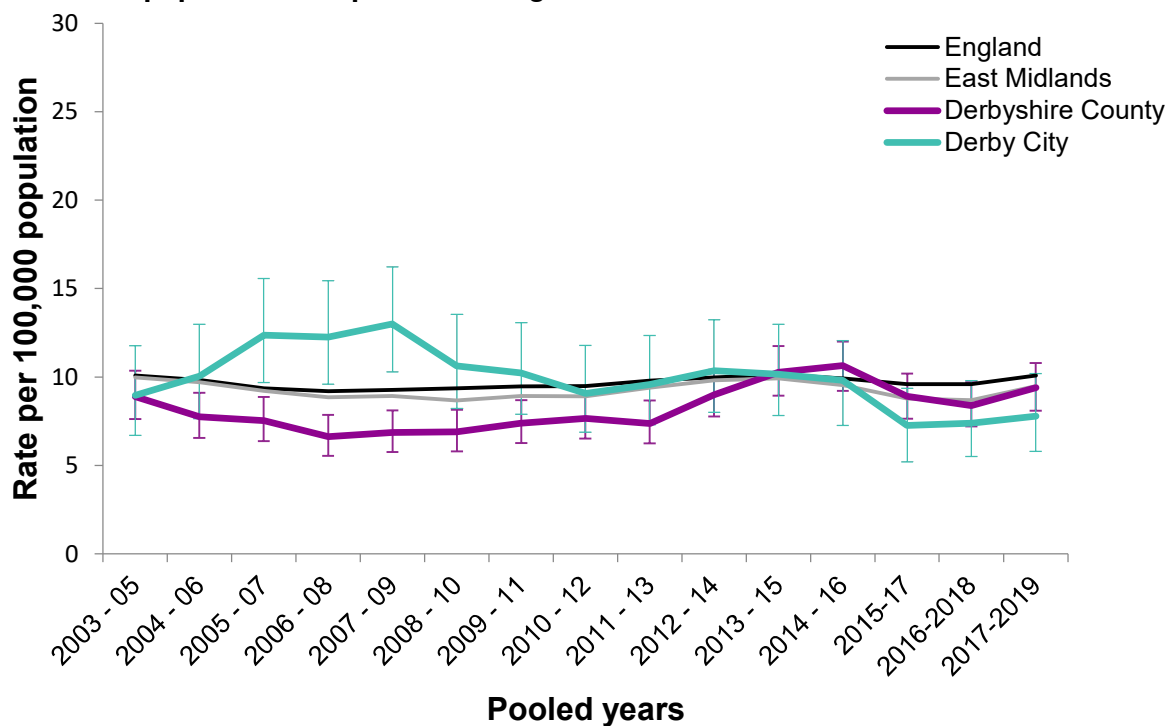
Overall, there was no statistical difference in the rates between Derby City and Derbyshire County. In Derbyshire County, the 3 year pooled mortality rate for 2017 - 2019 was 9.4 per 100,000. This represents a decline from the observed increase seen in rates across 2013-15 to 2014-16 (though it is not statistically significantly different to previous periods). The recent trend (Figure 3) shows that Derbyshire County had statistically similar rates compared to the average for England. In Derby City, the 3 year pooled mortality rate for 2017-19 was 8.0 per 100,000. Since 2008-10, the rates for Derby City have remained similar to the England average.

**Table 5: Age-standardised rates of deaths from suicide and injury of undetermined intent per 100,000 population in Derby City and Derbyshire County**

3 Year pooled period	Derbyshire County			Derby City			England		
	Number	Rate	Confidence Intervals	Number	Rate	Confidence Intervals	Number	Rate	Confidence Intervals
2013 - 15	216	10.3	(8.9-11.7)	65	10.2	(7.8-13.0)	14429	10.1	(10.0-10.3)
2014 - 16	225	10.6	(9.3-12.1)	63	9.8	(7.5-12.6)	14227	9.9	(9.8-10.1)
2015 - 17	187	8.9	(7.7-10.3)	47	7.3	(5.3-9.7)	13846	9.6	(9.4-9.7)
2016 - 18	177	8.4	(7.2-9.7)	51	7.7	(5.7-10.2)	14047	9.6	(9.5-9.8)
<b>2017 - 19</b>	<b>199</b>	<b>9.4</b>	<b>(8.1-10.7)</b>	<b>53</b>	<b>8.0</b>	<b>(5.9-10.4)</b>	<b>14788</b>	<b>10.1</b>	<b>(9.9-10.3)</b>

Age Standardised Rates calculated from 2013-15 onwards using revised PHE methodology with 10years+ at the population denominator  
 Source: Public Health Outcomes Indicator Tool

**Figure 3: Longer term trends in age-standardised rates of deaths from suicide and injury of undetermined intent per 100,000 population compared with regional and national rates.**



Error bars represent 95% confidence Intervals for the rates.  
 Source: Public Health Outcomes Indicator Tool

### 3.3 Deaths from suicide and injury of undetermined intent by demographic characteristics



### 3.3.1 Gender

Historically, there has always been a significantly higher number of males who die by suicide or injury of undetermined intent and this pattern is apparent for deaths from suicide and injury of undetermined intent registered in 2019, see Table 6.

**Table 6: Deaths from suicide and injury of undetermined intent registered in 2019 by sex**

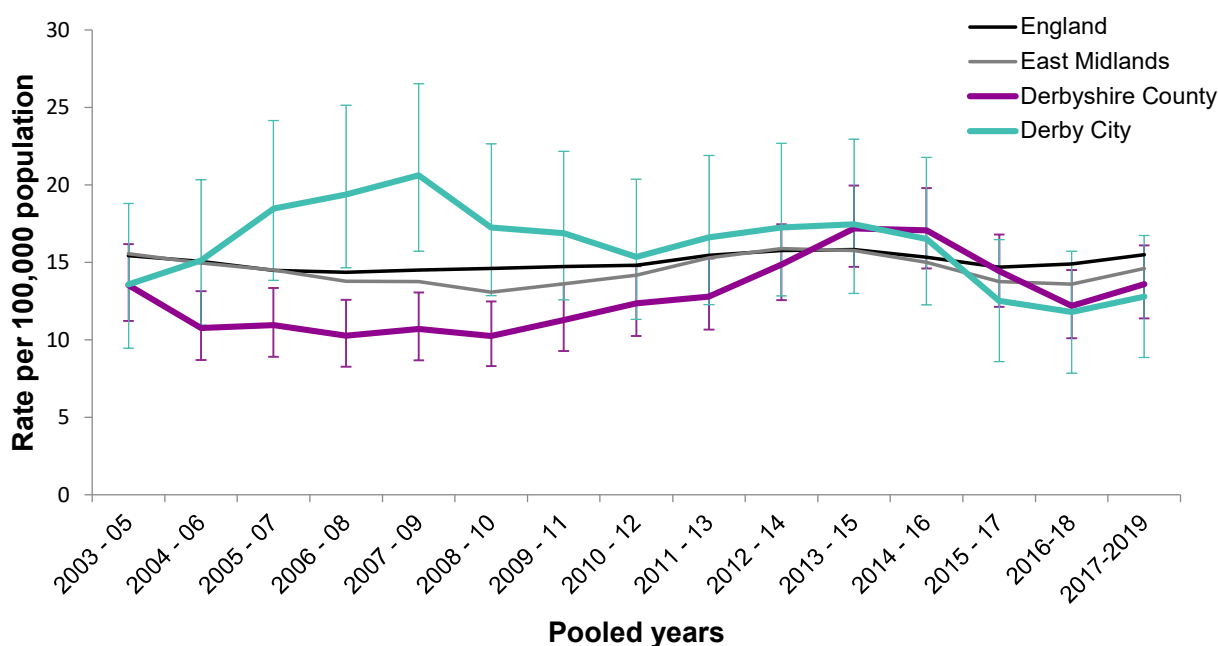
Sex	Derbyshire County			Derby City		
	Number	Rate	Confidence Intervals	Number	Rate	Confidence Intervals
Males	54 (70%)	11.5	(11.5 - 19.9)	17 (85%)	7.9	(7.9 - 22.3)
Females	23 (30%)	3.8	(3.8 - 9)	3 (15%)	***	***

Source: Primary Care Mortality Database

\*\*\* number of cases too small to calculate a robust rate

Figure 4 shows the trends over time in the rates of deaths from suicide and injury of undetermined intent in males. These are 3-year pooled rates which are more stable to allow comparisons over time. There was no statistical difference in the rates for males between Derbyshire County and Derby City or the national rate for males.

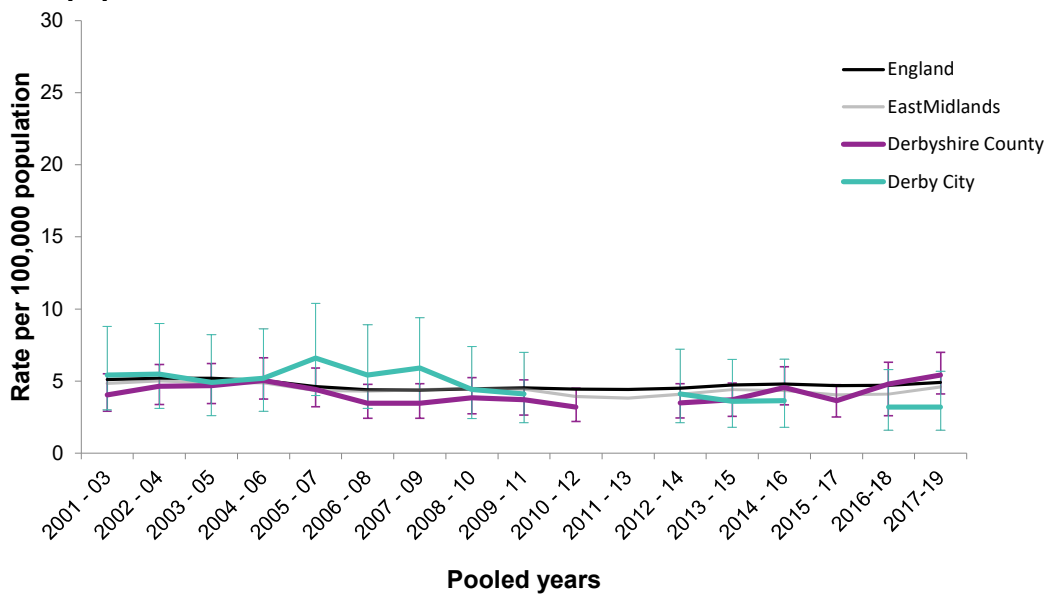
**Figure 4: Longer term trends in age-standardised rates of deaths from suicide and injury of undetermined intent per 100,000 population in males**



Error bars represent 95% confidence Intervals for the Rates.  
Source: Public Health Outcomes Indicator Tool

Figure 5 shows the trends over time in the rates of deaths from suicide and injury of undetermined intent in females. An age standardised rate for deaths in females in Derby City from suicide and injury of undetermined intent cannot be reliably calculated for 2010-2012, 2011-2013 or 2015-2017 due to small numbers; similarly the rates for females in Derbyshire County in 2011-13 could not be calculated. There was no statistical difference in the rates for females between Derby City and Derbyshire County or the national rate.

**Figure 5: Longer term trends in age-standardised rates of deaths from suicide and injury of undetermined intent per 100,000 population in females**

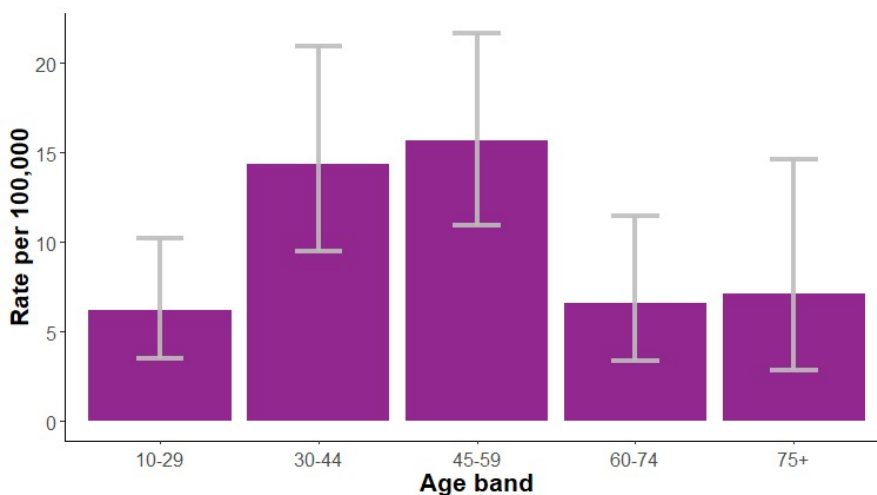


Error bars represent 95% confidence Intervals for the Rates.  
Source: Public Health Outcomes Indicator Tool

### 3.3.2 Age

Figure 6 shows the age specific rates of death from suicide and injury of undetermined intent for deaths registered in 2019. The highest rate of death was in the 45-59 year age group, which was significantly higher compared to the age specific rate for the 10-29 age group. The pattern across age group is primarily influenced by the data for the deaths of males, as the number of deaths for females is small.

**Figure 6: Age specific rates in deaths from suicide and injury of undetermined intent for deaths registered in 2019 by age group**



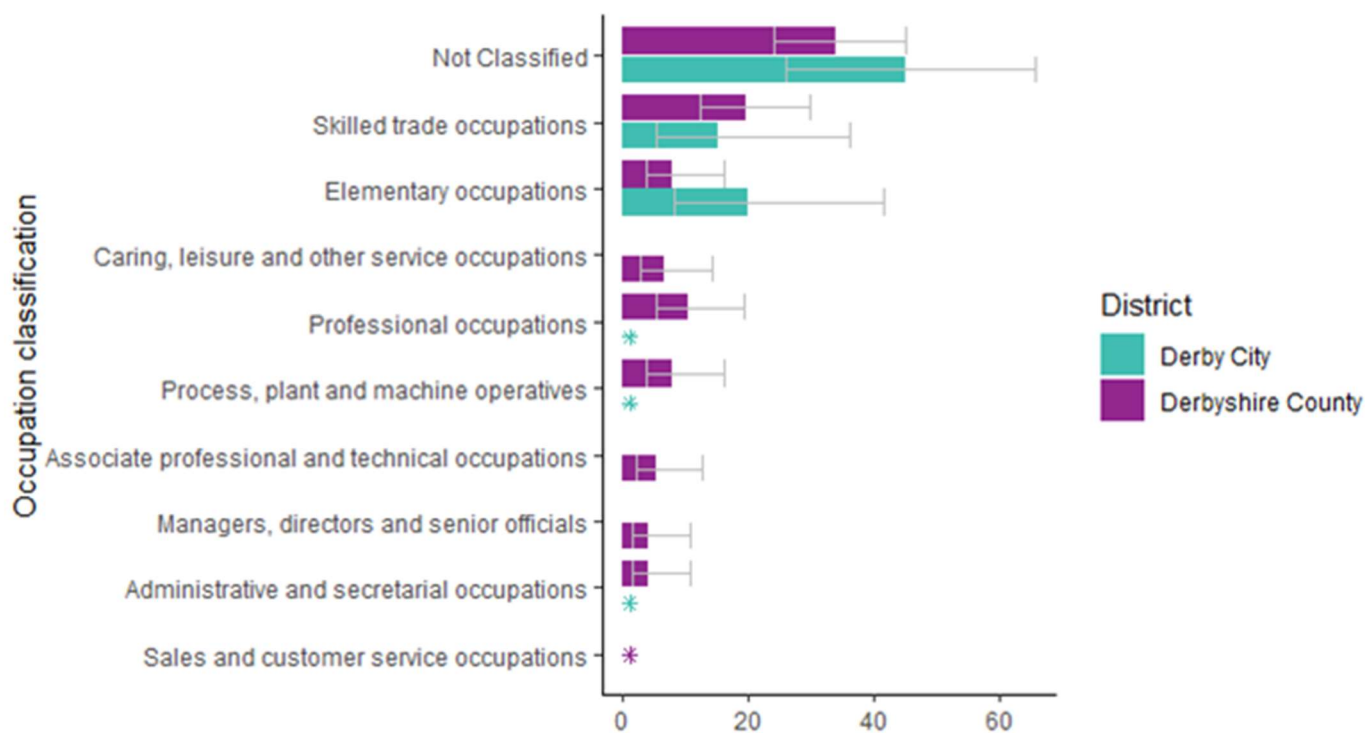
Error bars represent 95% Confidence Intervals  
Source: Primary Care Mortality Database  
Age categories specified by ONS<sup>6</sup>

<sup>6</sup> Policy on protecting confidentiality in tables of births and deaths statistics, see <https://www.ons.gov.uk/methodology/methodologytopicsandstatisticalconcepts/disclosurecontrol/policyonprotectingconfidentialityintables-of-birth-and-death-statistics>

### 3.3.3 Occupational group

Occupational group is considered as an indicator of socioeconomic status. Where data has been recorded in the death registration, this has been assigned within the Office of National Statistics (ONS) standard occupational classifications<sup>7</sup>. Figure 7 shows the proportion of suicide and injury of undetermined intent by occupational groups, for deaths registered in 2019. Of note, these are the proportions of the deaths that were registered and are not adjusted to the baseline numbers of each occupational group in the population.

**Figure 7: Proportion of deaths registered in 2019 from suicide and injury of undetermined intent by occupational classification group**



Error bars represent 95% Confidence Intervals

Source: Primary Care Mortality Database

\* Suppressed to prevent disclosure through differencing

'Not classified' mainly includes 'inadequately described occupations' and 'occupation not stated' but also includes 'retired', 'students', 'independent means', 'permanently sick', 'full-time care of the home and/or dependent relatives, voluntary workers' and 'unemployed person with no other information'.

The highest percentage of the deaths registered in 2019 for Derbyshire County by occupational classification group was skilled trade occupations (19%). In Derby City the highest percentage of deaths occurred in the elementary occupations (20%), closely followed by skilled trade occupation (15%). Of note, the occupation group was not known or not recorded for 35 deaths from suicide and injury of undetermined intent registered in 2019; 45% of deaths in Derby City and 34% of deaths in Derbyshire County were not classified.

## 3.4 Deaths from suicide and injury of undetermined intent by geographical area

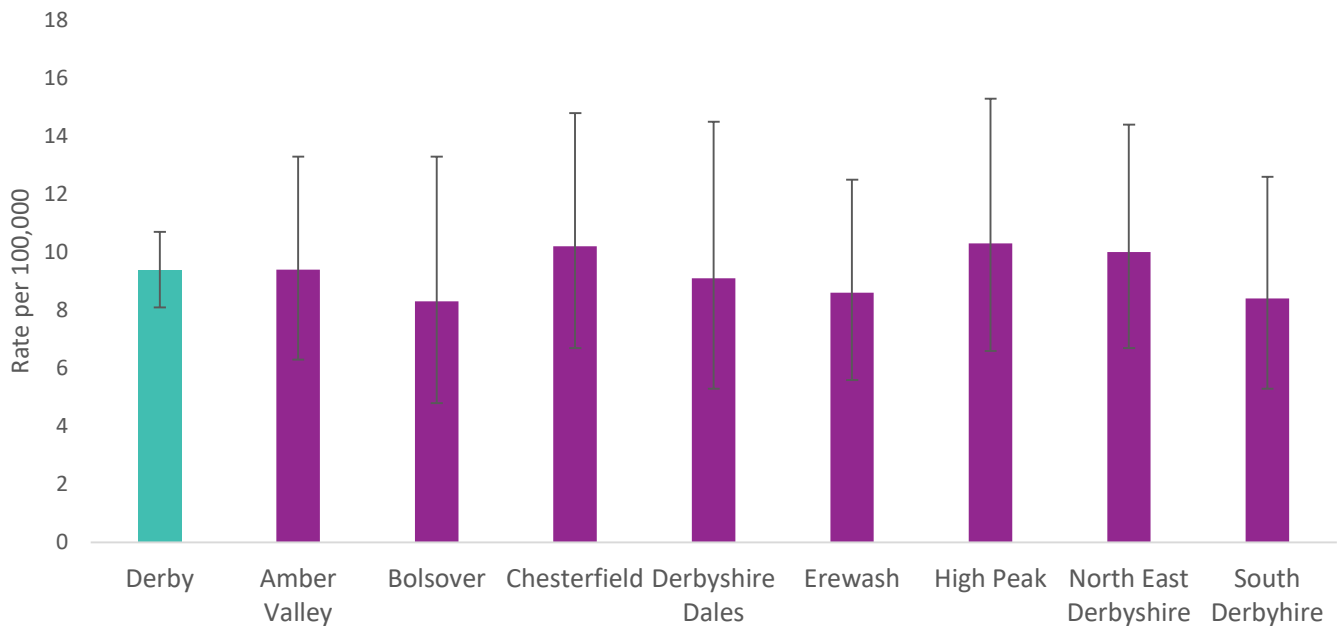
The Primary Care Mortality Database includes the usual resident address for registered deaths allowing analysis of the data by geographical area.

<sup>7</sup> <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc>

### 3.4.1 District

Figure 8 shows the rates for deaths from suicide and injury of undetermined intent registered in 2017 - 2019. There was no significant difference between districts.

**Figure 8: Age standardised rates of registered deaths from suicide and injury of undetermined intent by Local Authority District or Unitary Authority (2017-2019)**

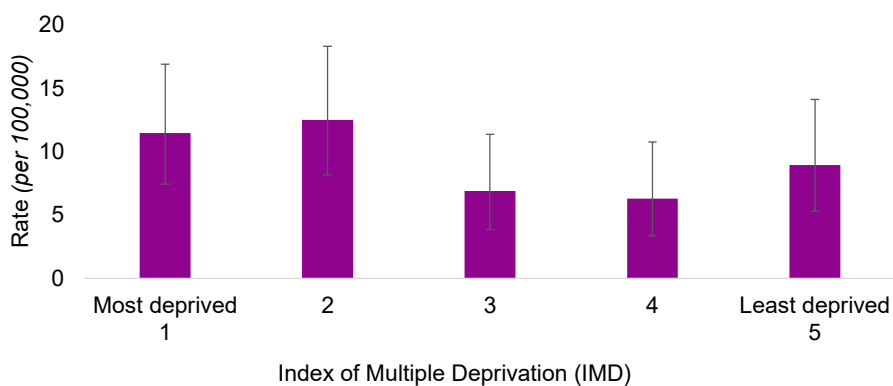


Error bars represent 95% Confidence Intervals  
Source: Primary Care Mortality Database

### 3.4.2 Deprivation

An analysis of deaths from suicide and injury of undetermined intent by lower super output area (populations of approximately 1500 people) was compared with Index of Multiple Deprivation scores, ranked in quintiles. Figure 9 shows the rate of deaths registered in 2017-2019 for Derbyshire County and Derby City by deprivation quintile. There were no statistically significant differences in the rates of suicide between the quintiles of deprivation. There is a high level of uncertainty around the data due to the small numbers of deaths used to calculate the rates for each quintile.

**Figure 9: Age standardised rates of deaths from suicide and injury of undetermined intent by national deprivation quintile, deaths registered in 2017-2019**



Calculated using Index of Multiple Deprivation 2019. Age standardised rates. Error bars represent 95% Confidence Intervals.  
Source: Primary Care Mortality Database and Office of National Statistics

### 3.4.3 Rural/Urban Classification

Comparison by rurality of an area was calculated, implementing the ONS classifications to Ordnance Survey mapping categories (Rural town and fringe, rural village and dispersed urban city and town, urban major conurbation and urban minor conurbation). Derby City is classified fully within the Urban City and Town category, whilst Derbyshire County spans across all settlement types. Settlement types were compared but there was no significant difference between settlement types.

## 3.5 Deaths from suicide and injury of undetermined intent by location and means of death

### 3.5.1 Place of death

Table 7 shows the locations of the deaths registered in 2019 across both Derbyshire County and Derby City. For 2019, 35 (36%) of the deaths occurred outside of Home and Hospital settings. The median approximate distance travelled to these outdoor locations from the home residence was 1.2 miles.

**Table 7: Deaths from suicide and injury of undetermined intent registered in 2019 by place of death**

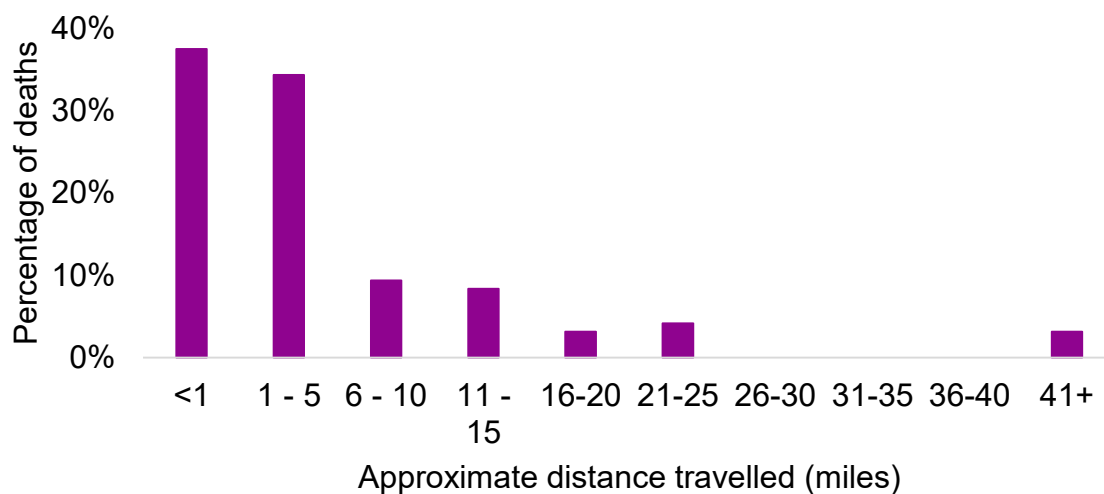
Place of Death	Number (% <sup>3</sup> )
Home	43 (44%)
Hospital <sup>1</sup>	18 (19%)
River	*
Railway	*
Other outdoors <sup>2</sup>	27 (28%)
Total	97

Source: Primary Care Mortality Database; <sup>1</sup> Hospital category does not distinguish between deaths which occurred in hospital following conveyance from another location, or a suicide attempt on the hospital site; <sup>2</sup> Includes parks and open spaces, car parks, commercial buildings, and other residential locations.

\* Suppressed to prevent disclosure through differencing

For the deaths that occurred outside of the home or hospital, the distance between resident home postcode of place of death was calculated for 3 years pooled data. The median approximate distance travelled was 1.65 miles. The median was calculated rather than the average due to the large range in distance travelled (0 miles - 139 miles.) Most deaths (72%) occurred within 5 miles of the resident's home. A breakdown of the percentage of deaths that occurred outside of the home and the distance travelled can be seen in Figure 10.

**Figure 10: Approximate distance travelled from resident postcode to place of death postcode for deaths registered from suicide and injury of undetermined intent in 2017, 2018 and 2019 that occurred outside of the home / hospital**

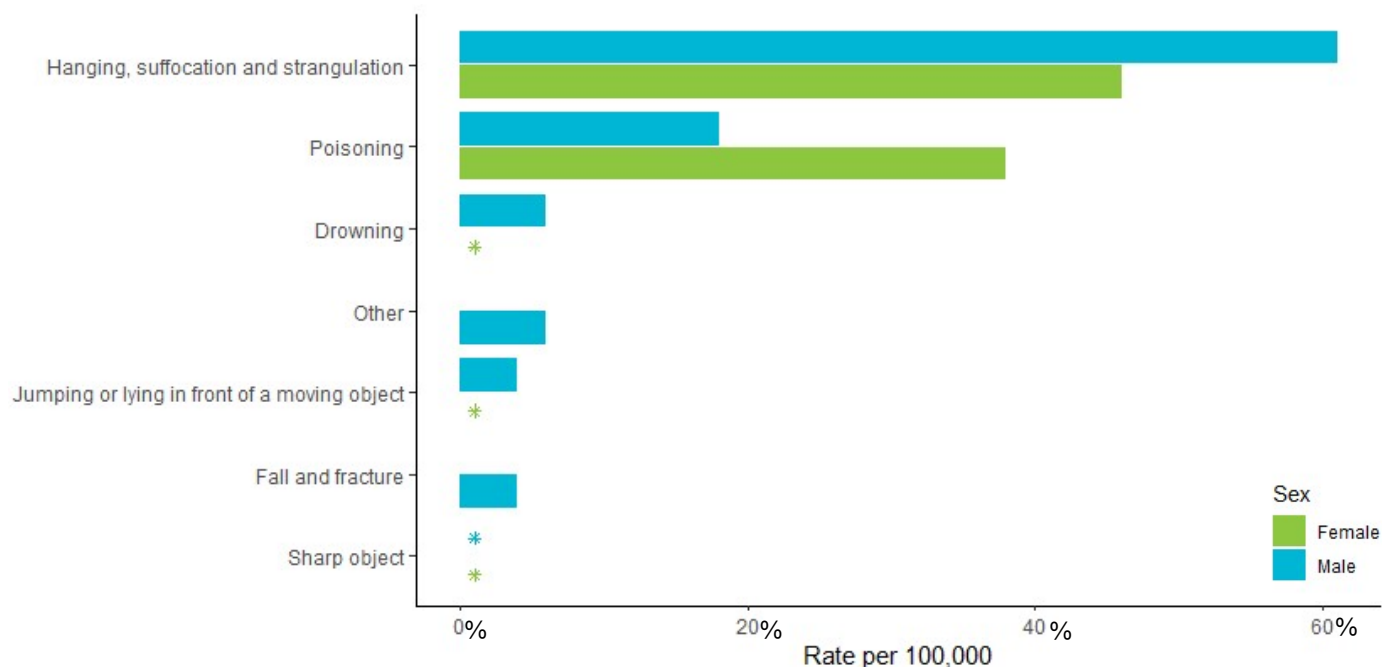


Source: Primary Care Mortality Database

### 3.5.2 Method of death

National data and the literature indicate there are differing patterns in the methods of suicide between males and females. Figure 11 shows the proportions of deaths in Derby City and Derbyshire County by sex. Hanging, suffocation and strangulation accounted for most deaths for both females and males.

**Figure 11: Method used in death and Injury of undetermined intent Derbyshire County and Derby City, by percentage of deaths registered in 2019**



Source: Primary Care Mortality Database

\* Suppressed to prevent disclosure through differencing

## 4 KEY FINDINGS

- The number of deaths by suicide and injury of undetermined intent registered in 2019 was 20 for Derby City and 77 for Derbyshire County. 56% of the deaths registered in 2019 occurred in 2018, with a median time interval of 293 days between date of death and date of registration.
- The 3-year pooled age-standardised rate for deaths from suicide and injury of undetermined intent in 2017-19 for Derby City and Derbyshire County was similar to the national rate.
- Of note for Derby City and Derbyshire County in 2019:
  - 73% of the deaths from suicide and injury of undetermined intent registered in 2019 were males.
  - The age specific rate of suicide and injury of undetermined intent was highest in the 45-59 age group for Derbyshire County combined with Derby City, which was significantly higher compared to the age specific rate for the 10-29 age group.
  - A higher percentage of deaths from suicide and injury of undetermined intent were coded to the skilled trade occupational group, though occupation was not known for 36% of the deaths registered in 2019.
  - At district level, there were no significant differences between districts for deaths registered for 2017-2019
  - There was no clear pattern with rates of death and level of deprivation.
  - 44% of deaths registered in 2019 occurred within the home environment and 28% occurred in other outdoor settings which included parks and open spaces, car parks, commercial buildings and other residential locations.
  - 61% male deaths and 46% of female deaths were due to hanging, strangulation or suffocation.
- There may be opportunities for further analysis related to this data, including:
  - Comparing the recent data for Derby City and Derbyshire County against the 2019 national and regional trends
  - Considering qualitative data, such as Reports to Prevent Future Deaths from the Courts and Tribunals Judiciary. This could ensure that any relevant recommendations or learning are applied locally
  - Where the rates and patterns of deaths continue to be similar over time, to pool several years of data in order to answer specific analytic questions in regards to demographic and geographical characteristics as well as in regards to place and method of death where there are small numbers in each category for one year of death registrations.

## 5 SUPPORT IN DERBYSHIRE FOR PEOPLE BEREAVED BY SUICIDE

For immediate and follow up help The Tomorrow Project offer a variety of support to help someone manage the loss up to 1 year after the death. There is no age restriction to access the service. A suicide bereavement support officer will make contact and arrange to meet face to face for on-going emotional and practical support. The project also provides support and information during / at the Inquest; and guidance and professional advice if you are concerned or caring for someone bereaved by suicide. People can refer themselves or can be referred by a professional by contacting [bereavement.derbys@tomorrowproject.org.uk](mailto:bereavement.derbys@tomorrowproject.org.uk); or leave a message on 0115 88 00 280 / 01246 541935 (Monday to Friday, 09:30-17:00).

Survivors of Bereavement by Suicide (SOBS) offer longer term peer support. This is accessed through support groups, a National helpline, e-mail and online forums and is available indefinitely. People refer themselves by contacting their local support group. Information around our groups can be found on our website by following the link <https://uksobs.org/we-can-help/local-support-groups/find/>. Additional bereavement support can be found <https://derbyandderbyshireemotionalhealthandwellbeing.uk/suicide-prevention/suicide-bereavement-support>