

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

[Deaths registered in 2021]

This short report provides information on deaths registered in 2021 from suicide and injury of undetermined intent in people living in Derby City and Derbyshire County



**Population Knowledge &
Intelligence Team**

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This report is a resource to support professionals working to prevent suicide. If you are looking for personal support, we 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 2021, including benchmarking against national trends, and to inform further analysis for the Derby and Derbyshire Suicide Prevention Partnership Forum. Previous reports are available on the Derbyshire Observatory.¹

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 261,136². The city has areas that experience significant levels of socioeconomic deprivation and poorer health outcomes compared with East Midlands and England³. Derbyshire County extends over 900 square miles, with an estimated population of 796,847² residents in a mix of market towns, villages, and rural areas including the Peak District National Park. 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 Profiles⁴.

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 2021. 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 Agreement⁵.

The data analysis for this report follows the methodology of previous reports and aligns with the methodology used by the Office for 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 2021. 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-X84 (age 10+ only), Y10-Y34 (age 15+ only). Only deaths of injury of undetermined intent in adults aged 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. Rates are not calculated for small counts (<10) to ensure comparisons are robust.

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

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

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

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

⁵ <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 2021 totalled 20 for Derby City and 80 for Derbyshire County. The standard proof required to categorise a death as suicide was changed from the criminal standard of “beyond all reasonable doubt” to the civil standard of “on the balance of probabilities” in July 2018⁶. For deaths registered in 2021, 85% of deaths were identified as suicide and 15% were identified as deaths from injury of undetermined intent.

The number of deaths by suicide and injury of undetermined intent is monitored annually. Table 1 shows how the total numbers of deaths registered in 2021 for Derbyshire County and Derby City compares with previous years. The number of deaths registered in 2021 was lower than the previous year for Derbyshire County, whereas the number of deaths registered in 2021 for Derby City was slightly higher than the previous year.

Table 1: Numbers of deaths from suicide and injury of undetermined intent by year of registration

Area	2012	2013	2014**	2015	2016	2017	2018	2019	2020	2021
Derby City	20	20	25	19	18	10	23	20	18	20
Derbyshire County	56	46	86	83	55	49	73	77	87	80
Total	76	66	111	102	73	59	96	97	105	100

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 2 presents the data comparing the year the death occurred with the year that the death was registered. The majority (43%) of deaths registered in 2021 were for deaths that occurred in 2020.

Table 2: 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	2020	2021
2017	59			5%	59%	36%				
2018	95			3%	13%	47%	36%			
2019	97	*		*	*	11%	56%	28%		
2020	105			*		*	7%	52%	37%	
2021	100					*	*	12%	43%	40%

Source: Primary Care Mortality Database

* Suppressed to prevent disclosure through differencing

⁶

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/changeinthestandardofproofusedbycoronersandtheimpactonsuicidedeathregistrationsdatainenglandandwales/2020-12-08>

In Derbyshire County 46% of deaths recorded as suicide or injury of undetermined intent registered in 2021 occurred in 2021. In Derby City 55% of deaths that were registered in 2021 occurred in 2020.

Table 3: Deaths registered in 2021 in Derby City and Derbyshire County by year of death

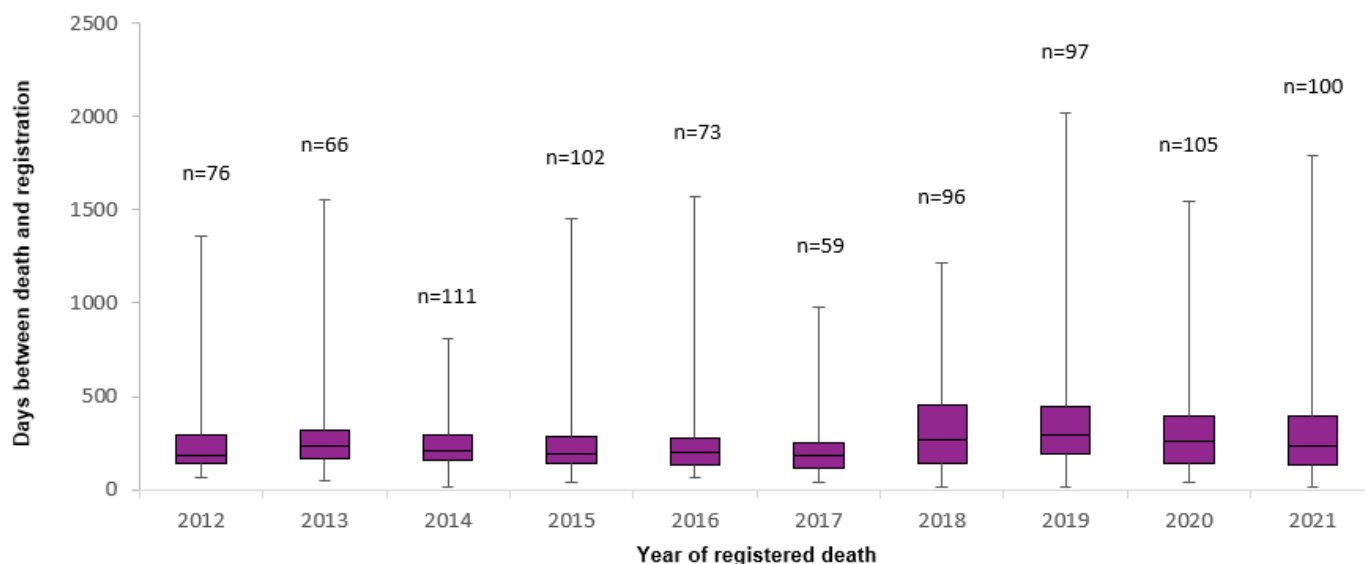
Year of Death	Derby City	Derbyshire County
2015		
2016	*	
2017		
2018		5%
2019	25%	9%
2020	55%	40%
2021	*	46%

Source: Primary Care Mortality Database

* Suppressed as prescribed by the disclosure control guidance (ONS)

For deaths recorded as suicide and injury of undetermined intent registered in 2021, the median time difference between date of death and date of registration was 231 days, with a range from 12 days to 1789 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 underdetermined intent



Horizontal line shows median time, box shows interquartile range, vertical lines show range.
Source: Primary Care Mortality Database

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 4 and displayed in Figure 2. 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 2 show the 95% confidence intervals around each data point. As these are small numbers, particularly for Derby City, even with pooled data there remains an inherent degree of uncertainty, such that caution should be taken in interpreting trends.

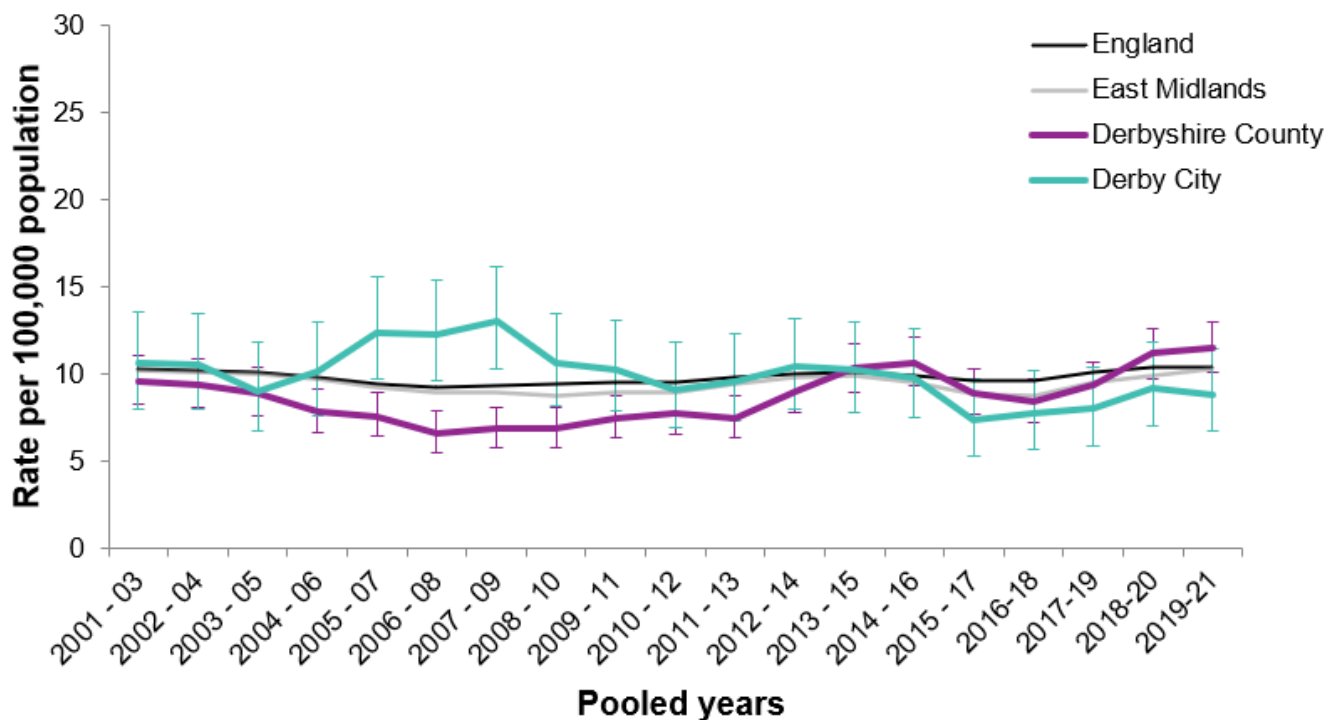
Overall, there is no statistical difference in the rates between Derby City and Derbyshire County. In Derbyshire County, the 3-year pooled mortality rate for 2019-21 was 11.5 per 100,000. In Derby City, the 3-year pooled mortality rate for 2019-21 was 8.8 per 100,000. The recent trend (Figure 2) shows that Derbyshire County had slightly higher rates compared to the average for England however these were not statistically significantly higher. Since 2008-10, the rates for Derby City have remained similar to the England average.

Table 4: 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)
2017-19	199	9.4	(8.1-10.7)	53	8	(5.9-10.4)	14788	10.1	(9.9-10.3)
2018-20	237	11.2	(9.7-12.6)	61	9.2	(7.0-11.8)	15249	10.4	(10.2-10.5)
2019-21	244	11.5	(10.1-13.0)	58	8.8	(6.7-11.4)	15447	10.4	(10.3-10.6)

Age-standardised Rates calculated from 2013-15 onwards using revised PHE methodology with 10years+ as the population denominator
Source: Primary Care Mortality Database

Figure 2: 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: Primary Care Mortality Database

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

3.3.1 Sex

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 2021, see table 5.

Table 5: Deaths from suicide and injury of undetermined intent registered in 2021 by sex

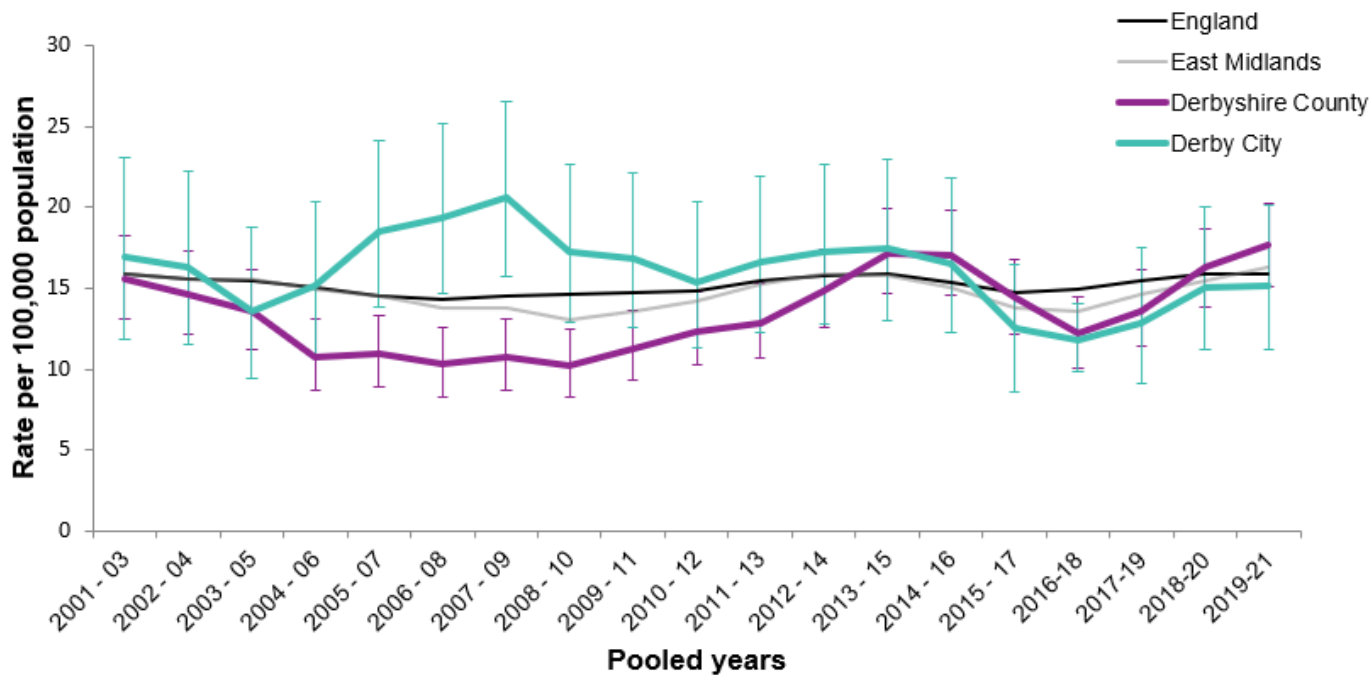
Sex	Derbyshire County			Derby City		
	Number	Standardised rate	Confidence Intervals	Number	Standardised rate	Confidence Intervals
Males	62 (78%)	18.4	(14 - 23.7)	17 (85%)	16	(9.3 - 25.6)
Females	18 (23%)	5.2	(3 - 8.2)	3 (15%)	*	*

Source: Primary Care Mortality Database

*number of cases too small to calculate a robust rate

Figure 3 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 is no statistical difference in the rates between Derbyshire County and Derby City or the national rate for males.

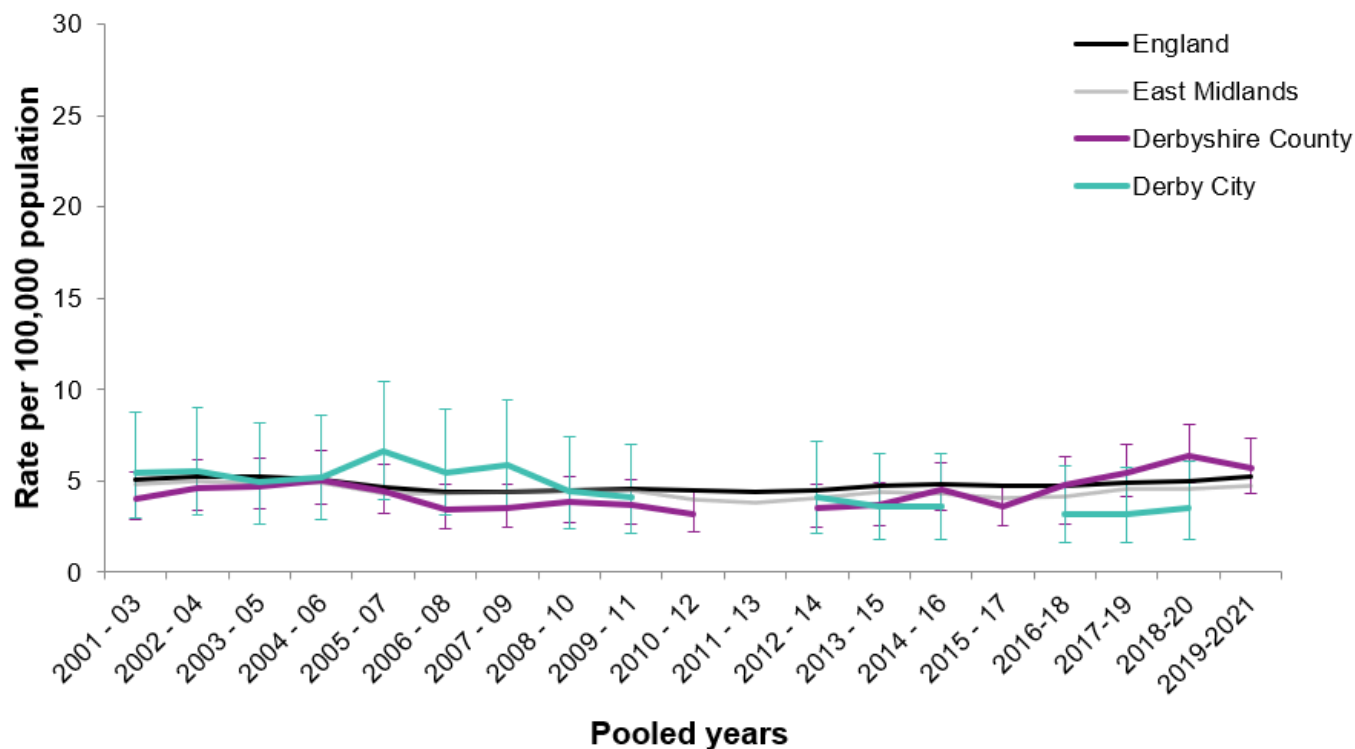
Figure 3: Longer term trends in age-standardised rates of deaths from suicide and injury of undetermined intent per 100,000 population in males



Error bars represent 95% confidence intervals for the rates.
Source: Primary Care Mortality Database

Figure 4 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 2010-12, 2011-13, 2015-17 or 2019-21 due to small numbers; similarly, the rates for females in Derbyshire County in 2011-13 could not be calculated (Figure 4).

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

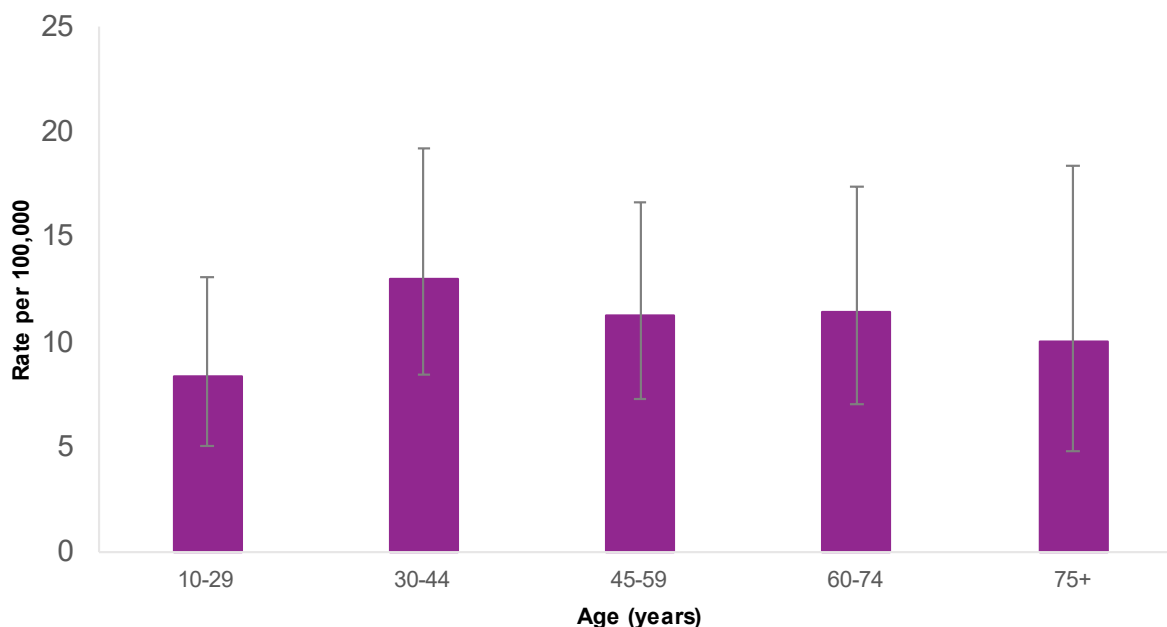


Error bars represent 95% confidence intervals for the rates.
Source: Primary Care Mortality Database

3.3.2 Age

Figure 5 shows the age specific rates of deaths from suicide and injury of undetermined intent for deaths registered in 2021. The highest rate of deaths was in the 30-44 year age group, but this was not statistically different to the other age groups. The pattern across age groups is primarily influenced by the data for the deaths of men, as the number of deaths for women is small.

Figure 5: Age specific rates for deaths from suicide and injury of undetermined intent registered in 2021 by age group for Derby City and Derbyshire



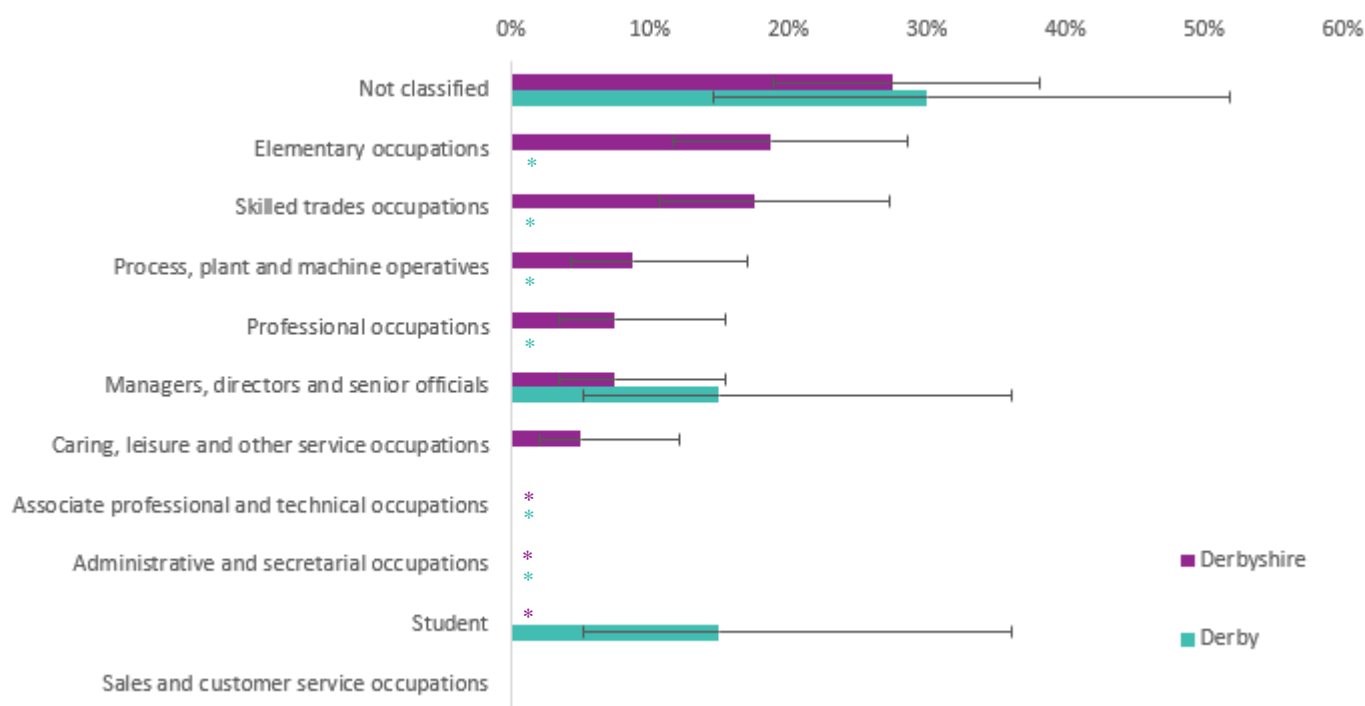
Error bars represent 95% Confidence Intervals
Source: Primary Care Mortality Database
Age categories specified by ONS⁷

⁷ Policy on protecting confidentiality in tables of births and deaths statistics, see <https://www.ons.gov.uk/methodology/methodologytopicsandstatisticalconcepts/disclosurecontrol/policyonprotectingconfidentialityintablesofbirthanddeathstatistics>

3.3.3 Occupational group

Occupational group is considered an indicator of socioeconomic status. Where data has been recorded in the death registration, this has been assigned within the Office for National Statistics (ONS) standard occupational classifications⁸. Figure 6 shows the proportions of suicide and injury of undetermined intent by occupational groups, for deaths registered in 2021. 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 6: Proportion of deaths registered in 2021 from suicide and injury of undetermined intent by occupational classification group



Error bars represent 95% Confidence Intervals

Source: Primary Care Mortality Database

* Counts of less than 3 are suppressed as prescribed by the disclosure control guidance (ONS)

In Derbyshire County, the highest percentage of deaths registered in 2021 by occupational classification group were from the elementary occupations group (18.8%), followed by 17.5% from skilled trades occupations. In Derby City the highest percentage of deaths registered in 2021 by occupational classification group were managers, directors and senior officials and students (15.0%). Of note, the occupational group was not known or not recorded for 28 deaths from suicide and injury of undetermined intent registered in 2021 comprising of 30% of deaths in Derby City, and 27.5% of deaths in Derbyshire County.

⁸ <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc>

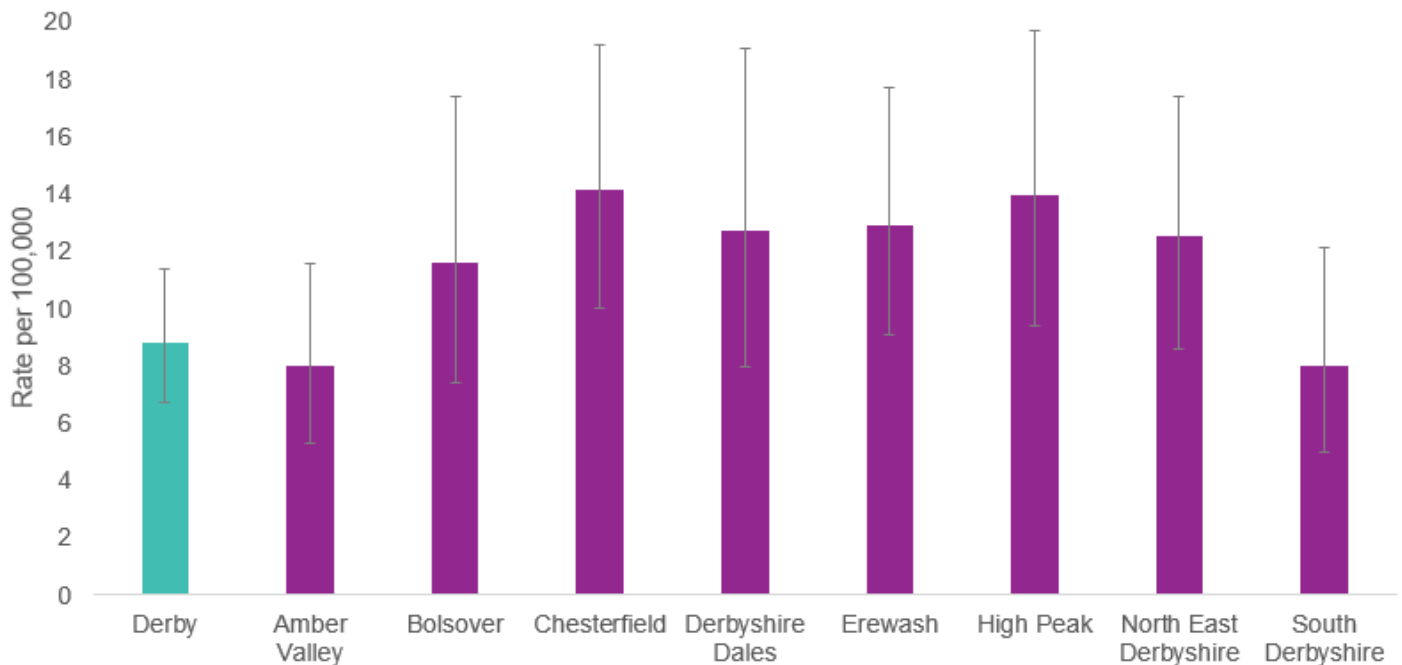
3.4 Deaths from suicide and injury of undetermined intent by geographical area

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

3.4.1 District

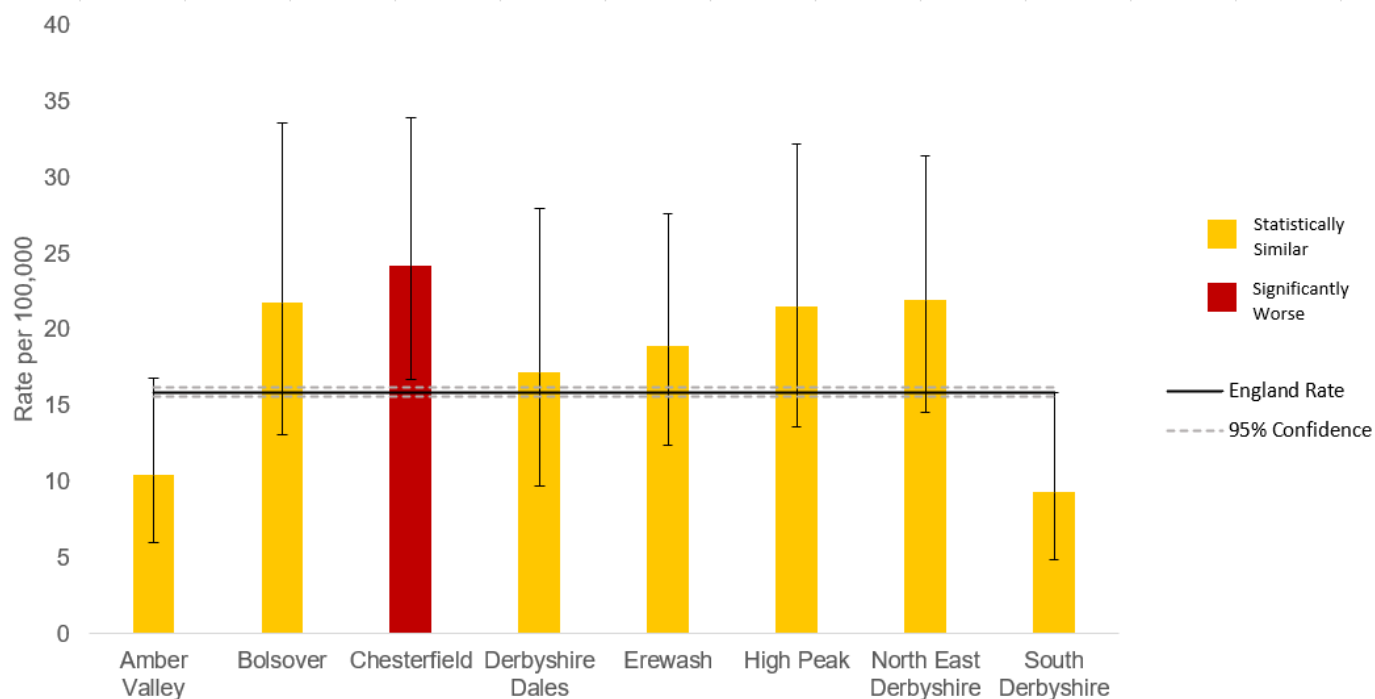
Figure 7 shows the rates for deaths from suicide and injury of undetermined intent registered in 2019-21. There was no significant difference between districts. Figure 8 shows the rates for deaths from suicide and injury of undetermined intent registered in 2019-21 for males in Derbyshire, the rate for Chesterfield was significantly higher than the England rate whereas the other districts in the County were statistically similar to the England rate. Figure 9 shows the rates for females in Derbyshire for deaths from suicide and injury of undetermined intent registered 2019-21, Amber Valley and Erewash had statistically similar rates to the England rate.

Figure 7: Age-standardised rates of registered deaths from suicide and injury of undetermined intent by Local Authority District or Unitary Authority (2019-2021)



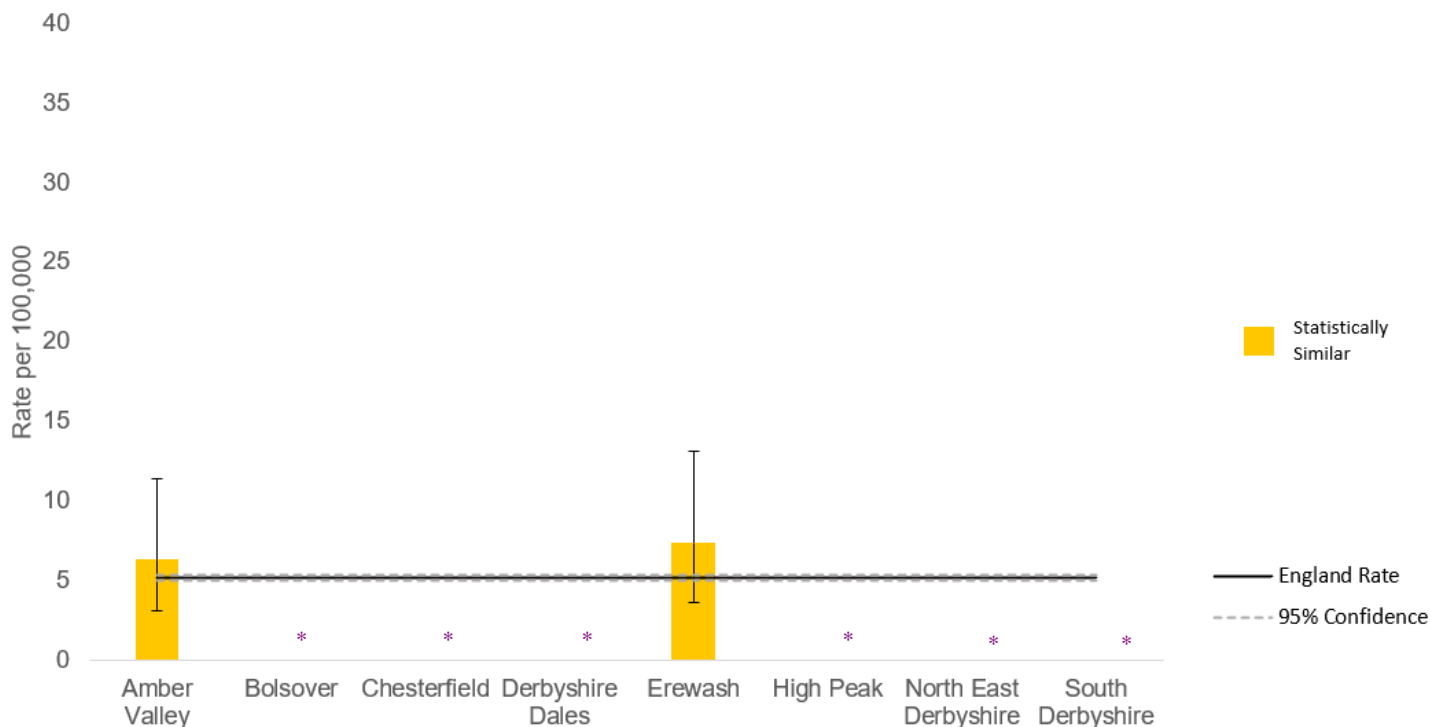
Error bars represent 95% Confidence Intervals
Source: Primary Care Mortality Database

Figure 8: Age-standardised rates of registered deaths from suicide and injury of undetermined intent for Males by Local Authority District or Unitary Authority (2019-2021)



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

Figure 9: Age-standardised rates of registered deaths from suicide and injury of undetermined intent for Females by Local Authority District or Unitary Authority (2019-2021)

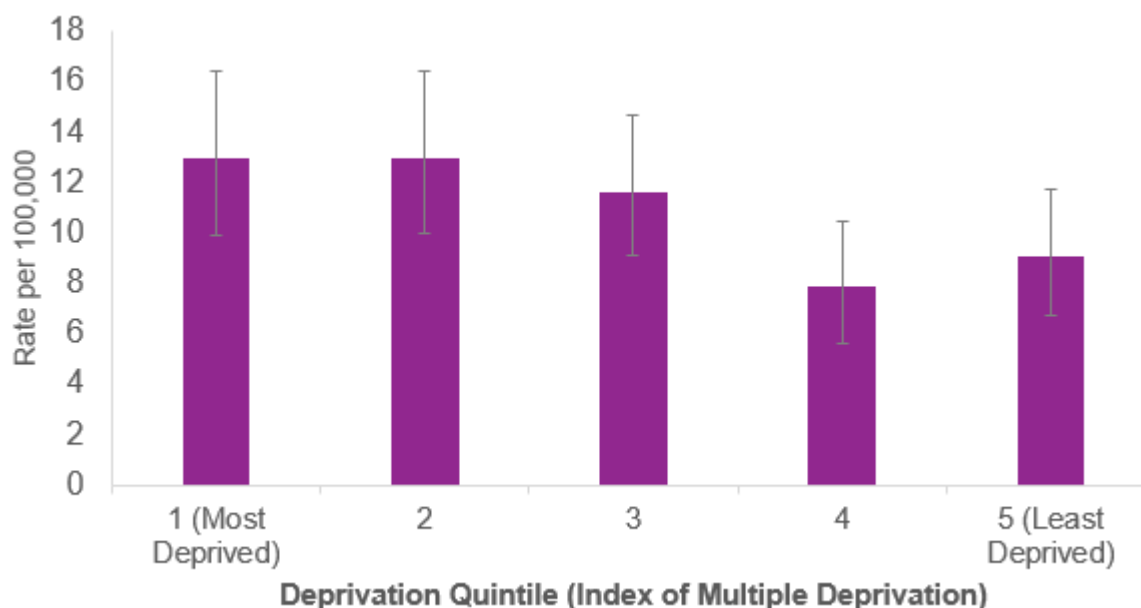


Error bars represent 95% Confidence Intervals
 Source: Primary Care Mortality Database, Fingertips
 * Represents where directly standardised rates cannot be calculated reliably due to too few deaths

3.4.2 Deprivation

An analysis of the data on 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 10 shows the rate of deaths registered in 2019-21 for Derbyshire County and Derby City by deprivation quintile. There are no statistically significant differences in the rates of suicide between the quintiles of deprivation in this dataset. 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. This is particularly evident by the large error bars.

Figure 10: Age-standardised rates of deaths from suicide and injury of undetermined intent by national deprivation quintile, deaths registered in 2019-2021



Calculated using Index of Multiple Deprivation 2019.
Age standardised rates. Error bars represent 95% Confidence Intervals.
Source: Primary Care Mortality Database and Office for National Statistics
2021 age standardised rates were calculated using Census 2021 population estimates by five-year age bands, using 2011 LSOA boundaries.
2021 mid-year population estimates were unavailable at time of publication, because of census-related delays.

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 6 shows the locations of the deaths registered in 2021 across both Derbyshire County and Derby City. For 2021, 31 (%) of the deaths occurred outside of Home and Hospital settings. The median distance travelled to these outdoor locations from the home residence was 5.6 miles.

Table 6: Deaths from suicide and injury of undetermined intent registered in 2021 by place of death

Place of Death	Number (% ³)
Home	51 (51%)
Hospital ¹	17 (17%)
Highway	*
Hotel	*
Railway	4 (4%)
River	*
Other ²	23 (23%)
Total Deaths	100

Source: Primary Care Mortality Database

¹ Hospital category does not distinguish between deaths which occurred in hospital following conveyance from another location, or a suicide attempt on the hospital site

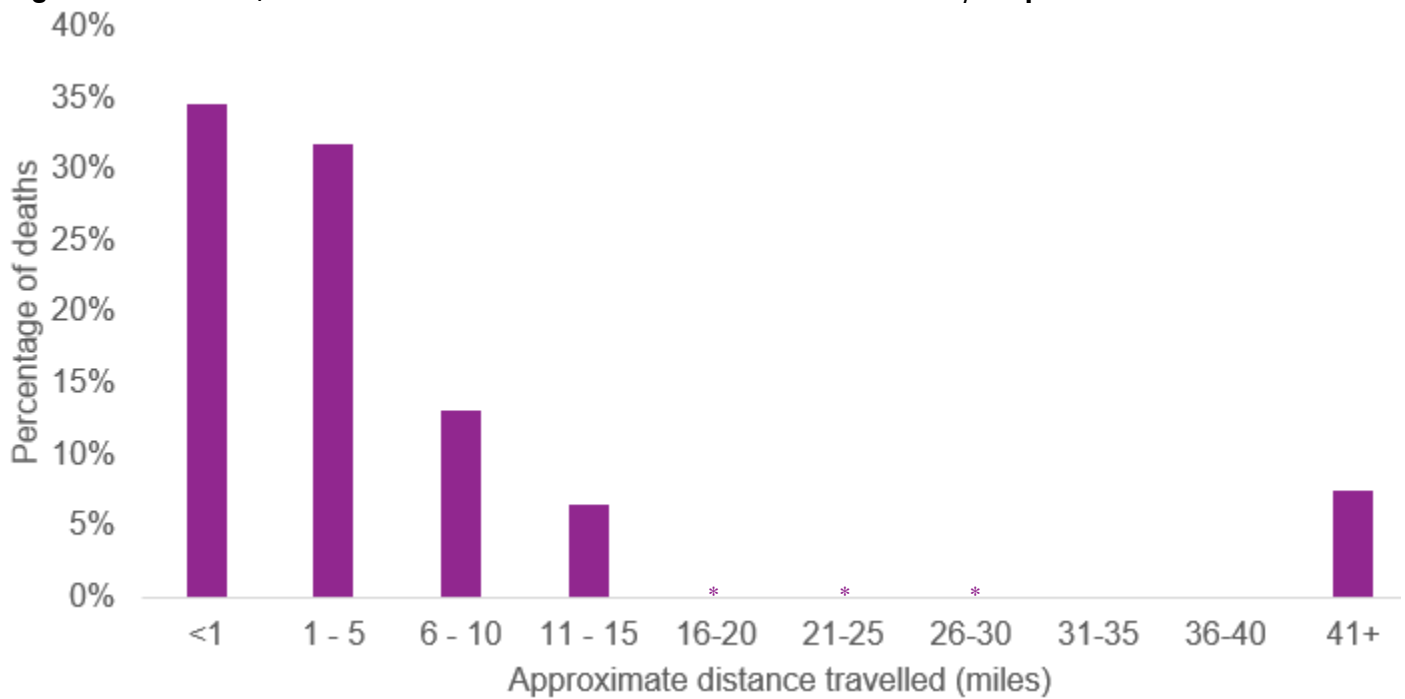
² Includes parks and open spaces, car parks, commercial buildings, and other residential locations.

³ Percentage does not total 100% due to rounding of values.

* Suppressed to prevent disclosure through differencing

Distance between resident home postcode and postcode of place of death was calculated for 3 years pooled data and the median distance travelled was 5.5 miles. The median was calculated rather than the average due to the large range in distance travelled (0 miles - 219 miles). Most deaths, 67%, 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 11.

Figure 11. Distance travelled from resident postcode to place of death postcode for deaths registered in 2019, 2020 and 2021 that occurred outside of the home/hospital

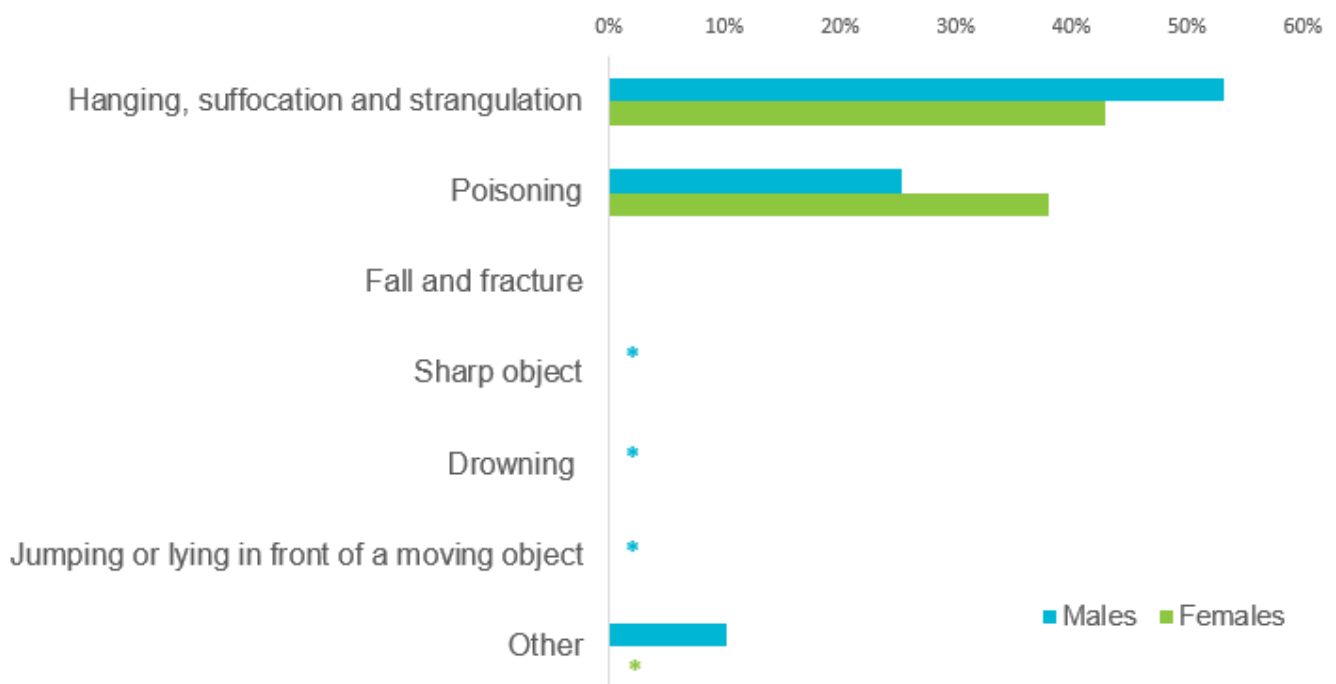


Source: Primary Care Mortality Database and Office for National Statistics
 * Counts of less than 3 are suppressed as prescribed by the disclosure control guidance (ONS)

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 12 shows the proportions of deaths in Derby City and Derbyshire County by gender. Hanging, suffocation and strangulation accounted for most deaths for both males and females.

Figure 12: Method of death for deaths from suicide and injury of undetermined intent in Derbyshire County and Derby City, by percentage of deaths registered in 2021



Source: Primary Care Mortality Database and Office for National Statistics
 * Counts of less than 3 are suppressed as prescribed by the disclosure control guidance (ONS)

4 KEY FINDINGS

- The number of deaths by suicide and injury of undetermined intent registered in 2021 was 20 for Derby City and 80 for Derbyshire County. 83% of the deaths registered in 2021 occurred in either 2021 or 2020, with a median time interval of 231 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 2019-21 for Derby City was similar to the national rate. The age-standardised rate for 2019-21 in Derbyshire County was slightly higher compared to the previous 4 periods and was higher than the national rate but not significantly.
- Of note for Derby City and Derbyshire County in 2021:
 - 79% of the deaths from suicide and injury of undetermined intent registered in 2021 were males.
 - The age specific rate of suicide and injury of undetermined intent was highest in the 30-44 years age group for Derbyshire County combined with Derby City, although the rates were statistically similar compared with other age groups.
 - A higher percentage of deaths from suicide and injury of undetermined intent were coded to the elementary occupational group for Derbyshire, though occupation was not known for 28% of the deaths registered in 2021.
 - At district level, there were no significant difference between districts for deaths registered 2019-21.
 - There was no clear pattern with rates of death and level of deprivation.
 - 51% of deaths registered in 2021 occurred within the home environment, 23% occurred in other outdoor settings which included parks and open spaces, car parks, commercial buildings and other residential locations. 17% occurred in hospitals.
 - 53% male deaths and 43% of female deaths were due to hanging, suffocation or strangulation.
- There may be opportunities for further analysis related to this data, including:
 - Comparing the recent data for Derby City and Derbyshire County against the 2021 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 regard 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; 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/>