

2016

Deaths from suicide and undetermined injury in Derby and Derbyshire

-2015 registered deaths

This short report provides information on deaths registered in 2015 from suicide and undetermined injury in people living in Derby and Derbyshire

Deaths from suicide and undetermined injury in Derby and Derbyshire Report 2016

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Author	Public Health Intelligence Derbyshire County Council County Hall Matlock Derbyshire DE4 3AG ☎ Tel: (01629) 536182 ✉ Email: Richard.flint@derbyshire.gov.uk

Executive Summary

- This report provides analysis on the deaths from suicide and undetermined injury of residents of Derbyshire County and Derby City that were registered in 2015.
- The number of deaths from suicide and undetermined injury has decreased in both Derby City (from 25 in 2014 to 19 in 2015, a 24% decrease) and Derbyshire County (from 86 in 2014 to 83 in 2015, a 3% decrease).
- Over three-quarters of the deaths registered in Derbyshire in 2015 were men.
- The highest age-specific rate of death from suicide was in those aged 40-49 years, with a similar pattern observed in males.
- At a district level, Chesterfield had the highest rate of deaths from suicides and undetermined injury and none of the districts observed a statistically significant change in rate between 2014 and 2015.
- As in previous years, the most common place of death reported in 2015 was at home.
- Approximately half of suicide deaths in 2015 were from hanging/strangulation/suffocation. The most common method amongst men was hanging/strangulation/suffocation and for women was overdose/poisoning and hanging/strangulation/suffocation.

This report provides information on deaths from suicides and undetermined injury occurring in people living in Derby City and Derbyshire County. It includes deaths registered in the calendar year 2015. The report gives the current position, benchmarks against national trends and includes further analysis on local deaths to inform progress against the Derbyshire and Derby Community Suicide Prevention Strategic Framework. The data relates to people resident in Derby and Derbyshire, most of whom are also registered with GP practices in Derby and Derbyshire.

Derbyshire is a geographically large county with a population of 782,365 (ONS 2015 population estimate). It is spread over a large rural geographical area that encompasses much of the 555 square miles of the Peak District National Park. The population is predominately white and is projected to increase over the next decade, with the greatest increase in the over 60 age group. Overall the indicators of health for people in Derbyshire are similar to average when compared with those for the East Midlands and England. There are however areas of poor health in the most deprived districts such as Bolsover and Chesterfield. The relatively prosperous appearance of rural areas masks pockets of socio-economic deprivation that affects substantial numbers of the rural population.

Derby City is a predominately urban area with a population of 254,251 (ONS 2015 population estimate). Black and minority ethnic groups comprise a significant proportion of the population, and there is also a rapidly-growing migrant population. The city has significant levels of socio-economic deprivation and indicators of health that are worse than average when compared with England and the East Midlands.

Deaths from Suicide and Undetermined Injury

Deaths **from Suicide and Undetermined injury** are based on persons aged 10 years and over where the primary cause of death is due to one of the following codes: ICD9 E950-E959, E980-E989 excl E988.8; ICD10 X60-X84(10+years), Y10-Y34 (15+years).

Coroners hold inquests for all suspected deaths from suicide, and deaths cannot be registered until this process is completed. There is therefore often a delay between the date the individual died and the date that the death is registered, with the length of the delay being dependant on the timing and length of the inquest. The methodology used to calculate the national and local suicide rates (see <http://fingertips.phe.org.uk/profile-group/mental-health/profile/suicide>) and used in this report is based on deaths registered within a calendar year. The count of suicides within a particular calendar year will therefore include deaths that occurred in previous years, but not registered until that year.

When calculating age standardised rates previous reports have employed methodology as used by Public Health England (PHE), using all ages as the denominator when calculating rates. At the beginning of August 2016 PHE revised the methodology and now calculate the rates using 10yrs+ as the denominator. This report has been updated to reflect this latest methodology with rates from previous years being updated to allow for comparison over time.

Suicide and Undetermined Injury in Derby and Derbyshire

In 2015, there were 102 deaths registered in Derby City and Derbyshire County where the cause of death was specified as suicide and undetermined injury, while it is slightly lower figure than 2014 figure, it still remains higher than recent previous years (Table 1).

Table 1: Number of deaths from suicide and undetermined injury, by year of registration

Area	2008	2009	2010	2011	2012	2013	2014	2015
Derby	22	28	17	21	20	20	25	19
Derbyshire	39	51	51	50	56	46	86	83
Total	61	79	68	71	76	66	111	102

Source: Public Health Mortality File

Table 2 illustrates the relationship between the date of death and the date the death is registered.

The majority of deaths from suicide and undetermined injury registered in 2015 in Derbyshire occurred in 2014 and 2015.

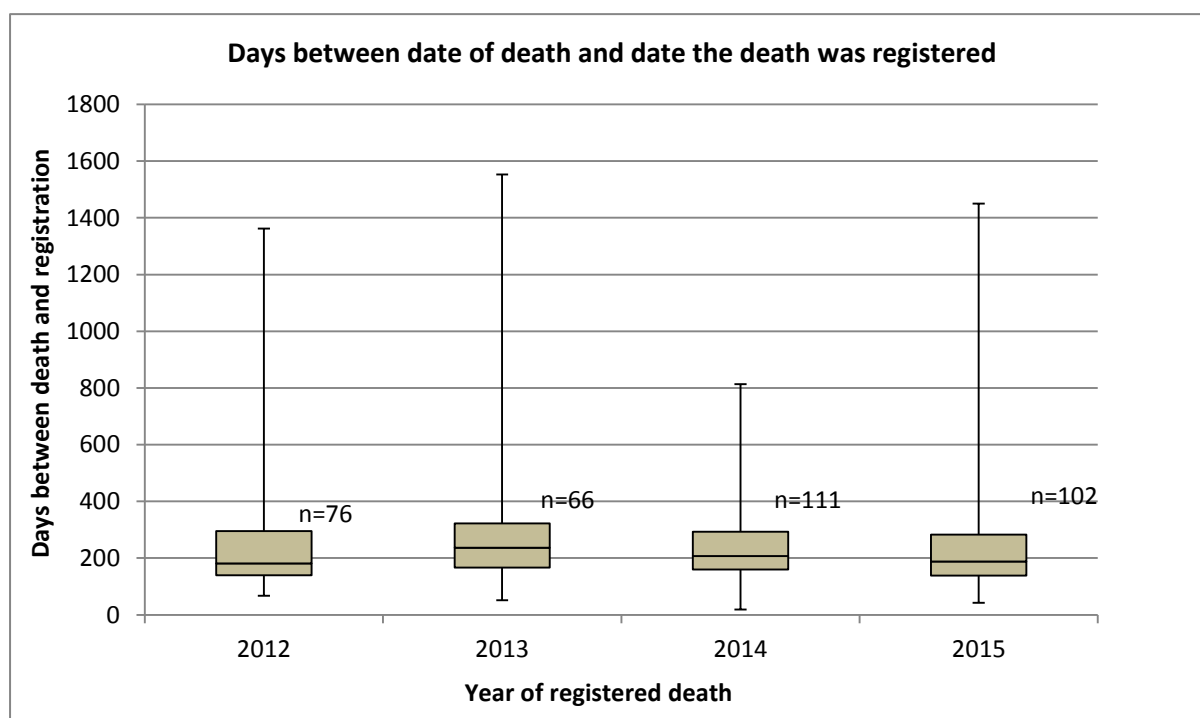
Table 2: Comparison between year of death from suicide and undetermined injury and year death registered

Year death registered	Year death occurred (%)							Total
	Pre-2010	2010	2011	2012	2013	2014	2015	
2012	4 (5.3)	5 (6.6)	32 (42.1)	35 (46.1)	-	-	-	76 (100)
2013	-	2 (3.0)	3 (4.5)	34 (51.5)	27 (40.9)	-	-	66 (100)
2014	-	-	-	6 (5.4)	63 (56.8)	42 (37.8)	-	111 (100)
2015	-	-	1 (1.0)	-	5 (4.9)	53 (52.0)	43(42.2)	102(100)

Source: Public Health Mortality File

For deaths from suicide and undetermined injury registered in 2015, the median time between date of death and the date the death was registered was 189 days. The median time between date of death and registration has remained similar over the last 4 years, but in 2015, the upper amount of days between death and registration increased when compared to the 2014 figure (Figure 1).

Figure 1: Time between date of death and registration of deaths from suicide and undetermined injury in Derbyshire (horizontal line shows median time, box shows interquartile range and vertical lines show range)



Source: Public Health Mortality File

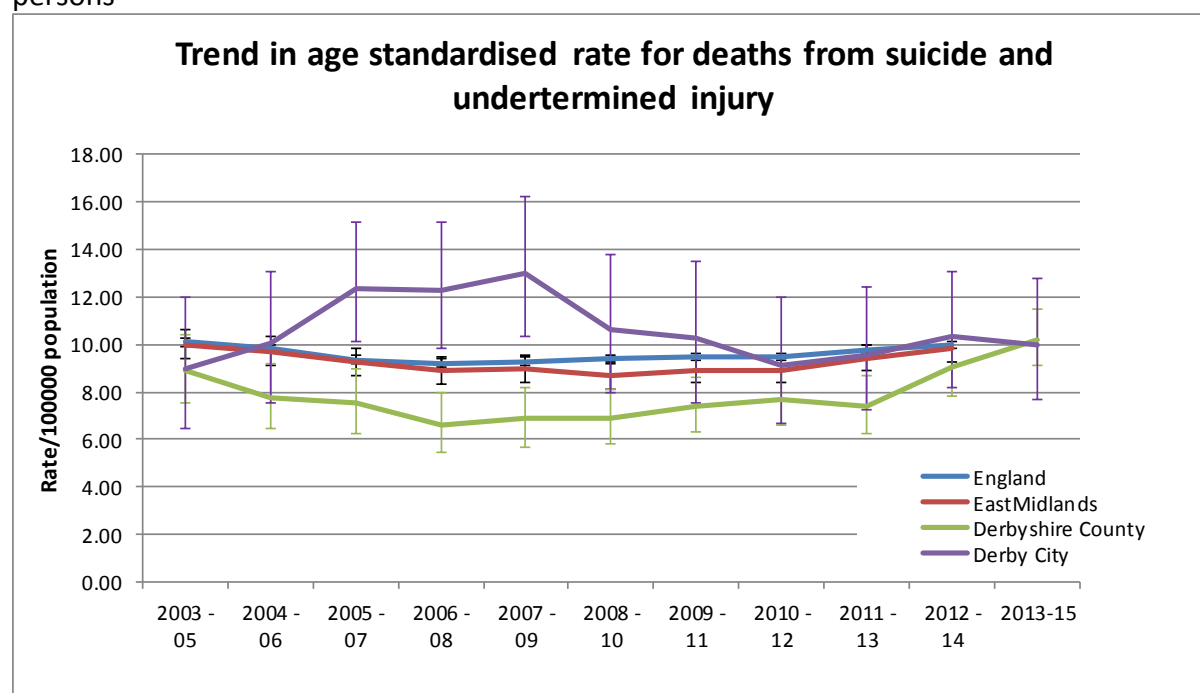
Changes in rates over time

From a statistical analysis point of view, there are relatively few deaths from suicide and undetermined injury each year in Derbyshire. Rates are therefore presented as rolling three-year averages in order to smooth the yearly fluctuations that can occur when dealing with small numbers. Such annual fluctuations make trends difficult to reliably interpret. Despite using 3-year rolling averages the small numbers of suicides mean that even these trends need to be interpreted cautiously.

Historically, the rate of deaths from suicide and undetermined injury in Derbyshire County has been lower than the national rate. The county suicide rate steadily increased between 2006 and 2013, with a greater rate of increase in 2014 and 2015. The current three-year rate (10.23 deaths per 100,000 population) is the highest in the last decade.

The smaller numbers of deaths from suicide and undetermined injury observed in Derby City results in greater fluctuations in the 3-year rolling average rate. Since 2007/09, when there was a peak of 13.1 deaths per 100,000 in Derby City, there has been a downward trend in the rate until 2011/13, since when there has been a small increase.

Figure 2: Trends in mortality from suicide and undetermined injury, 2003/05 to 2013/15- persons



Source: Public Health Outcomes Framework Indicator Tool

- 2013-15 figures for England and East Midlands had not been released by PHE at the time this report was produced, and will be added at a later date.

Table 3: Age-standardised rates of deaths from suicide and undetermined injury per 100,000 population, 2003/05 to 2013/15

Area	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10
England	10.10	9.84	9.36	9.20	9.28	9.38
East Midlands	9.99	9.72	9.23	8.87	8.95	8.68
Derbyshire County	8.91	7.75	7.55	6.63	6.87	6.90
Derby City	8.98	10.06	12.37	12.26	13.01	10.64

Area	2009-11	2010-12	2011-13	2012-14	2013-15
England	9.48	9.49	9.80	9.99	-
East Midlands	8.93	8.93	9.40	9.82	-
Derbyshire County	7.40	7.67	7.39	9.01	10.23*
Derby City	10.25	9.09	9.58	10.38	10.00*

Source: Public Health Outcomes Framework Indicator Tool (years 2003/05 – 2012/14).

Years 2013-15

*County and City ASRs calculated using the PCMD using methodology as used by PHE (updated in August 2016 to use 10yr+ as the denominator)

Gender

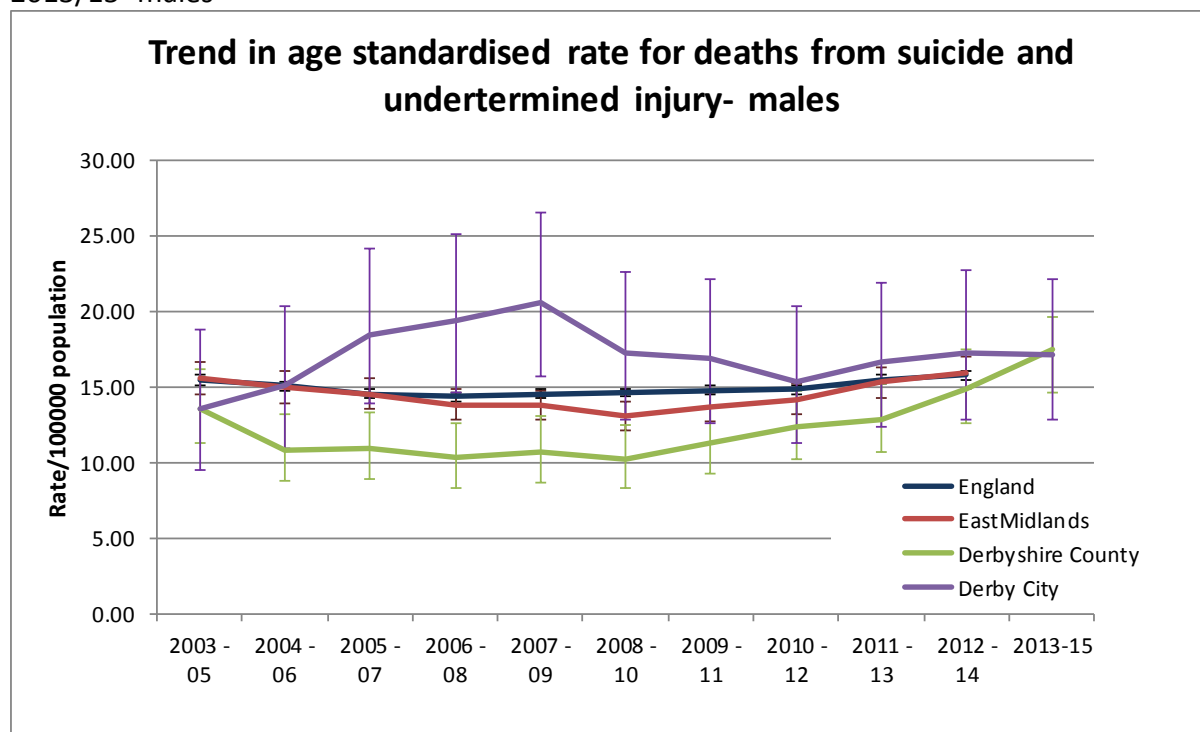
Derby City and Derbyshire County mirror the national picture of more deaths from suicide and undetermined injury occurring in men than women. Across Derbyshire County and Derby City in 2015, nearly 5 out of every 6 suicides were amongst men, slightly higher than the England where approximately 3 out of every 4 suicides were amongst men. This higher proportion appears to be due to a slightly lower rate in Derbyshire County and Derby City amongst females and a higher rate amongst males, compared to England. Over the last 10 years, there has been little change in the local rate of death from suicide amongst females, but an increase amongst men. Historically, the rate in Derbyshire in males was significantly lower than the national rate, but the local rate is now similar to the national rate. In Derby City, the male rate is also similar to England.

Table 4: Deaths from suicide and undetermined injury, single year-2015, by gender

Gender	Derby City		Derbyshire County		Total (%)
	Number (%)	Rate (per 100,000 popn)	Number (%)	Rate (per 100,000 popn)	
Male	17 (89.5)	17.2	70 (84.3)	20.6	87(85.3)
Female	2(10.5)	1.8	13 (15.7)	3.5	15 (14.7)
Total	19 (100)	9.0	83 (100)	11.0	102 (100)

Source: Public Health Mortality File

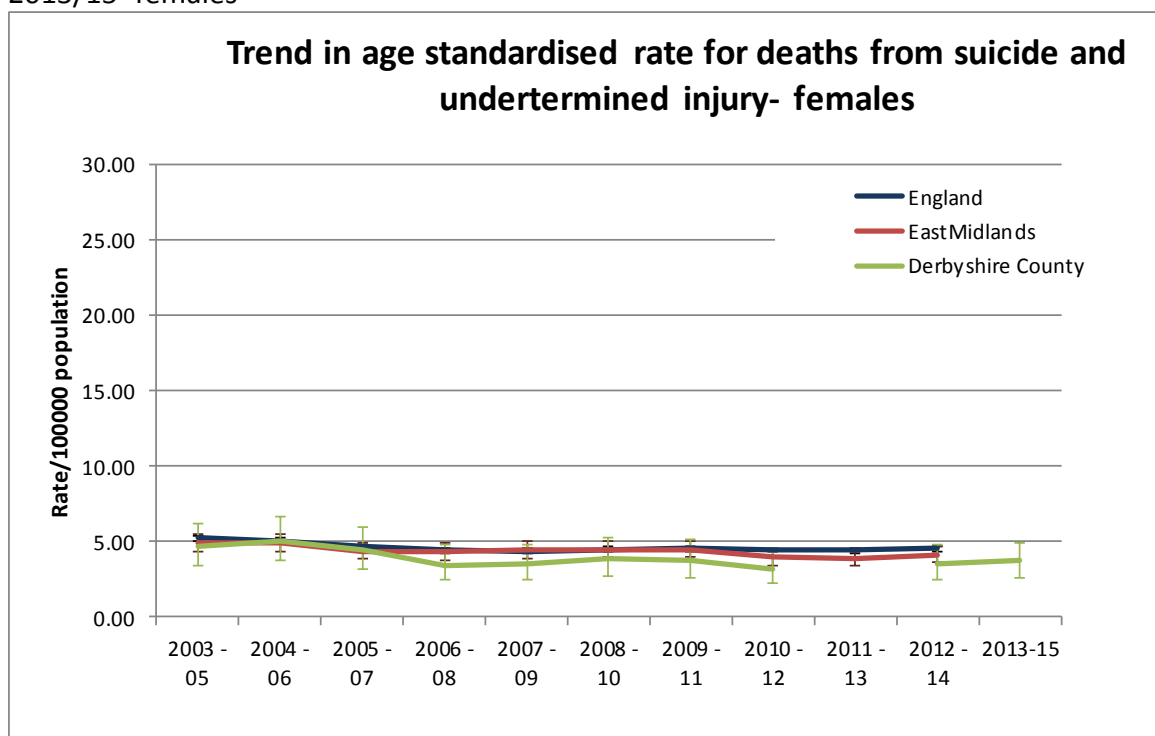
Figure 3: Trends in mortality from suicide and undetermined injury, 3yr pooled- 2003/05 to 2013/15- males



Source: Public Health Outcomes Framework Indicator Tool

- 2013-15 figures for England and East Midlands had not been released by PHE at the time this report was produced, and will be added at a later date.

Figure 3a: Trends in mortality from suicide and undetermined injury, 3yr pooled- 2003/05 to 2013/15- females



Source: Public Health Outcomes Framework Indicator Tool

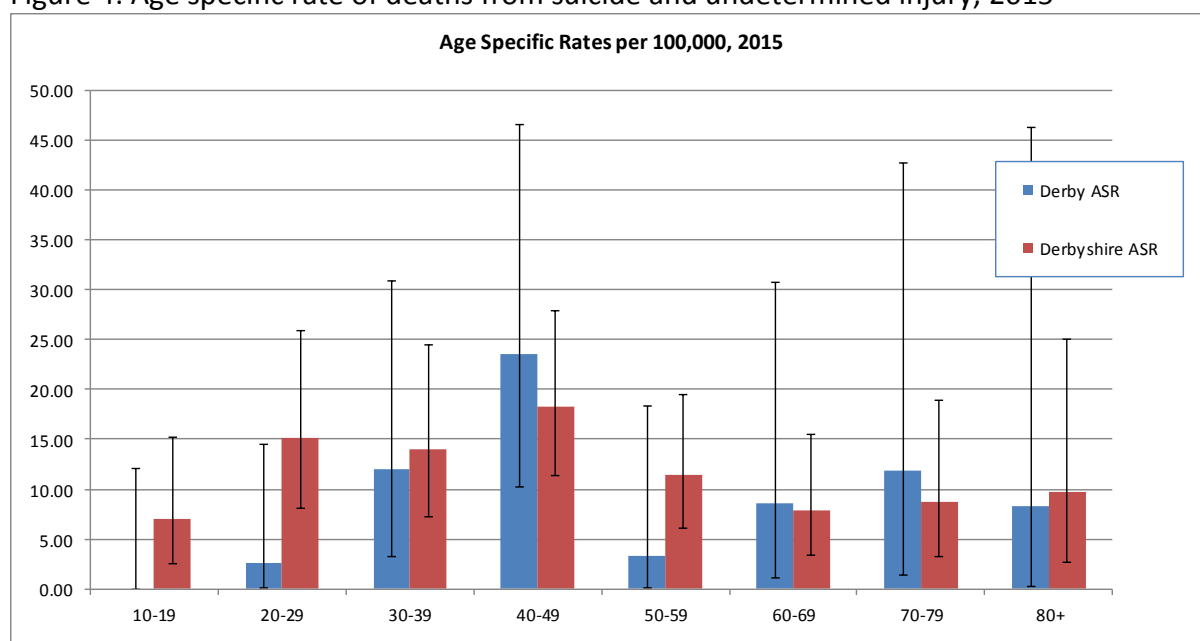
- 2013-15 figures for England and East Midlands had not been released by PHE at the time this report was produced, and will be added at a later date.
- Rates for Derby City females and County 2011-13 are not shown as the counts are too small for a reliable directly standardised rate calculation.

Age

In 2015 the highest rate of deaths of suicide in both Derby City and Derbyshire County was in the 40-49 years age band (23.61 and 18.26 deaths per 100,000 population respectively). There is a decrease in the rate of suicide in the 50-59 years age band which increases in the ages bands above 60 years.

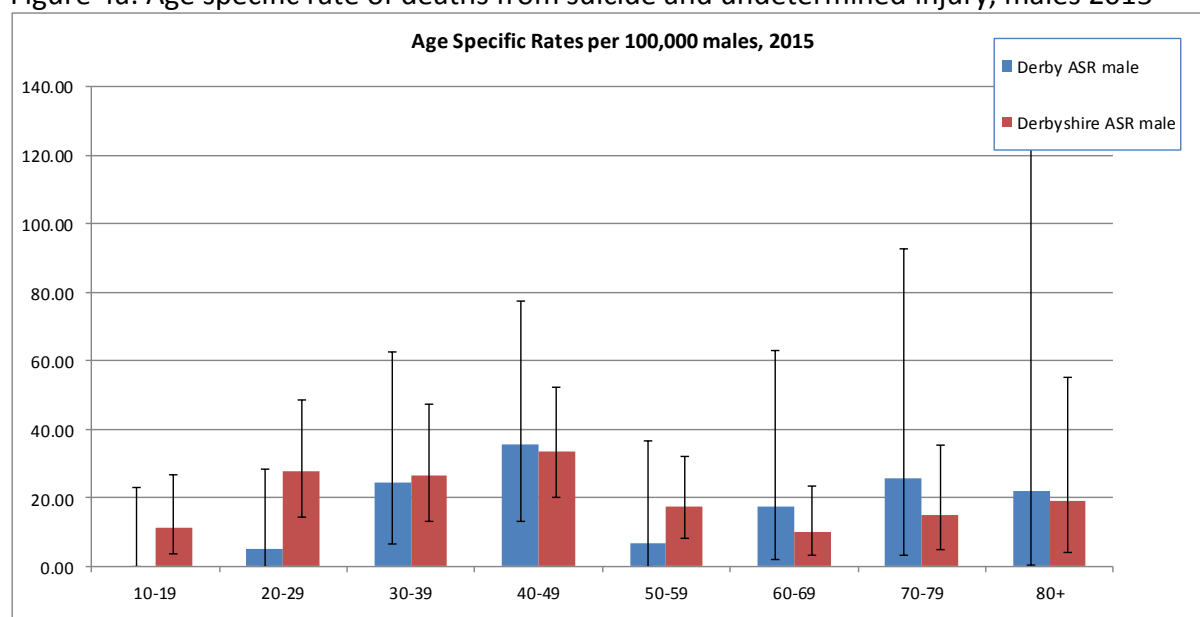
Over the last few years, the highest rate of deaths from suicide and undetermined injury in Derbyshire has been in the 30 to 60 age groups. There is a similar pattern in the rate by age group amongst men, it is however difficult to discern a pattern among women as the numbers are small.

Figure 4: Age specific rate of deaths from suicide and undetermined injury, 2015



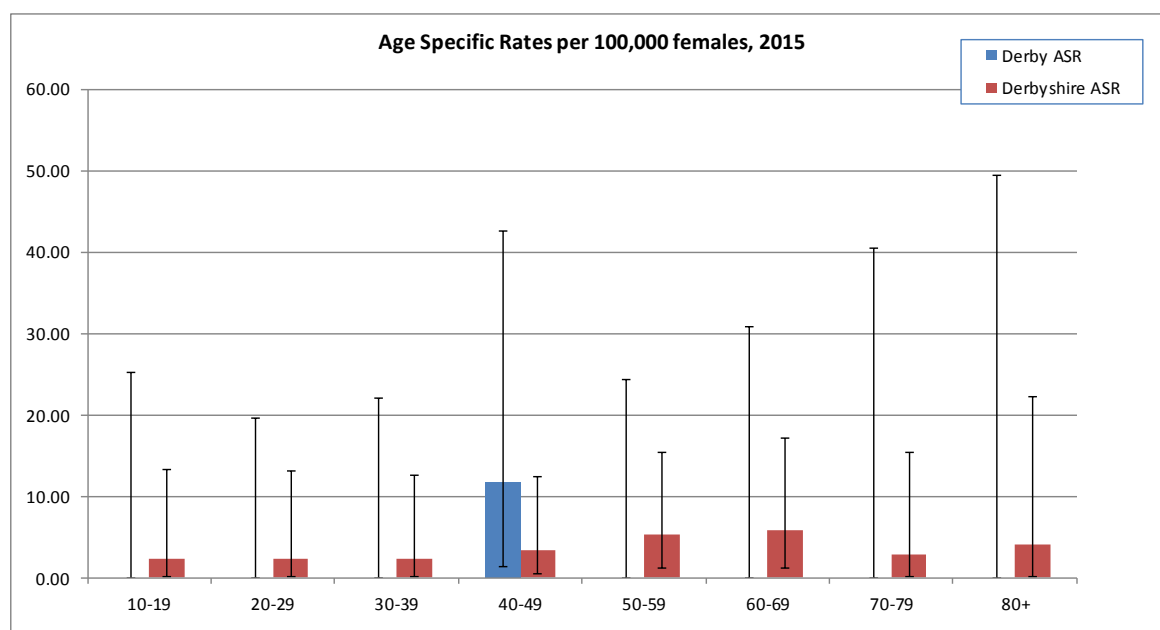
Source: Public Health Mortality File and ONS population

Figure 4a: Age specific rate of deaths from suicide and undetermined injury, males 2015



Source: Public Health Mortality File

Figure 4b: Age specific rate of deaths from suicide and undetermined injury, females, 2015

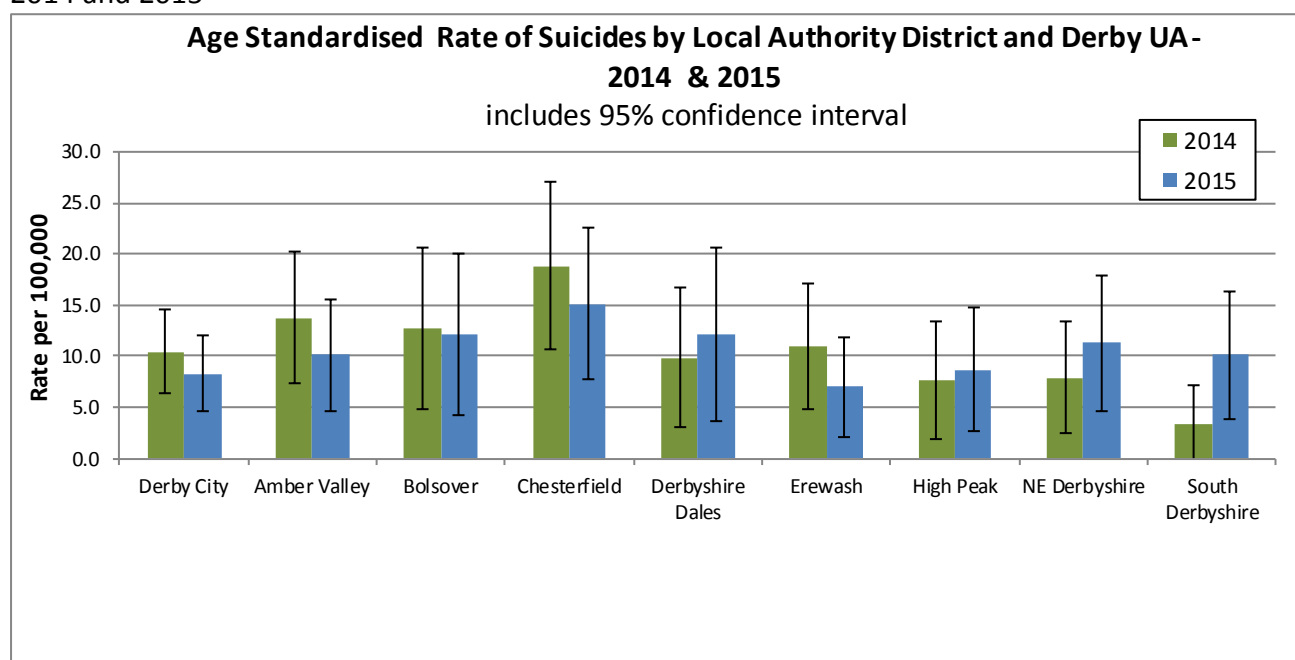


Source: Public Health Mortality File

District

In 2015, the highest rate of deaths from suicide and undetermined injury was in Chesterfield, with the lowest in Erewash. All districts had rates that were statistically similar. No districts had a significant change in suicide rate between 2014 and 2015.

Figure 5: Rate of deaths from suicides and undetermined injury by Local Authority District, 2014 and 2015



Source: Public Health Mortality File

Ethnicity

The Public Health mortality file does not include information on ethnicity, and therefore analysis by ethnicity is not available.

Deprivation

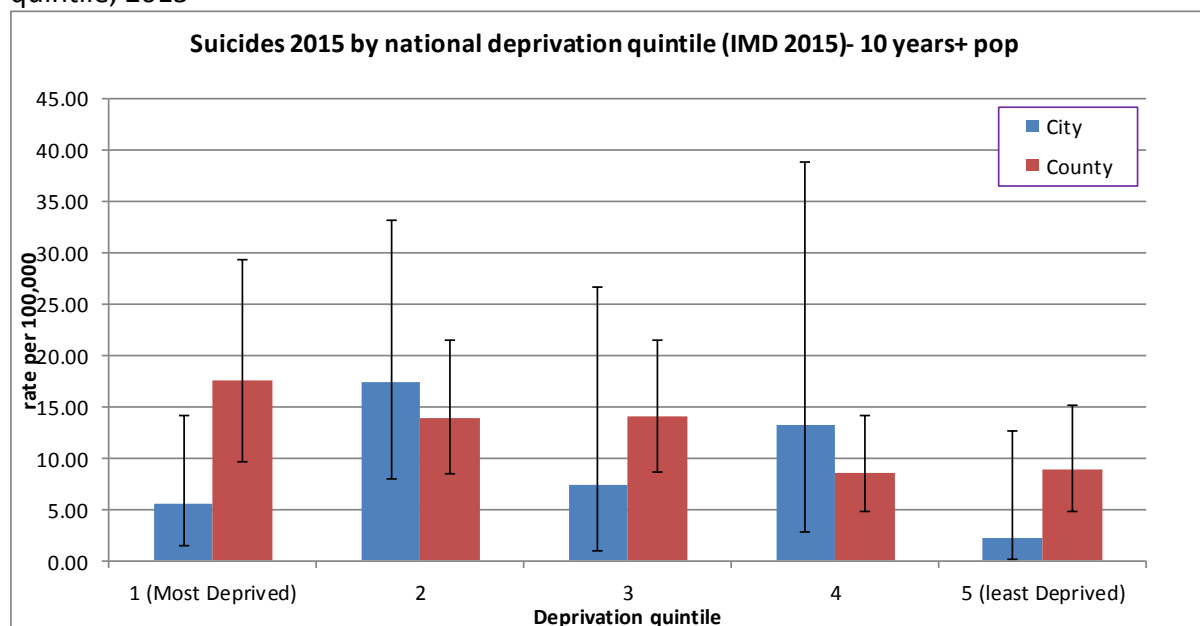
Deprivation analysis has been carried out using quintiles, based on the resident super output area and overall Index of Multiple Deprivation 2015 (IMD) score. Derbyshire County has a mean IMD score of 18.5 and Derby City a mean IMD score of 27.08¹ (where a higher score indicates a greater level of socio-economic deprivation).

Table 5: Index of Multiple Deprivation 2015 Quintiles

Quintile rank	Range of IMD score
1 (most deprived)	33.9 - 92.6
2	21.4 - 33.9
3	13.9 - 21.4
4	8.4 - 13.9
5 (least deprived)	0.5- 8.4

In Derby City there appears to be no association between socio-economic deprivation and deaths from suicide; the second and fourth quintiles have the highest number of suicides amongst individuals. In Derbyshire County there appears to be an association between deprivation and rates of death from suicide, with the most deprived quintile having the highest number of deaths and the least deprived the fewest. At a local level, the numbers of deaths from suicide and undetermined injury on an annual basis makes reliable statistical analysis difficult.

Figure 6: Rates of deaths from suicide and undetermined injury by national deprivation quintile, 2015



Source: Public Health Mortality File and Communities and Local Government

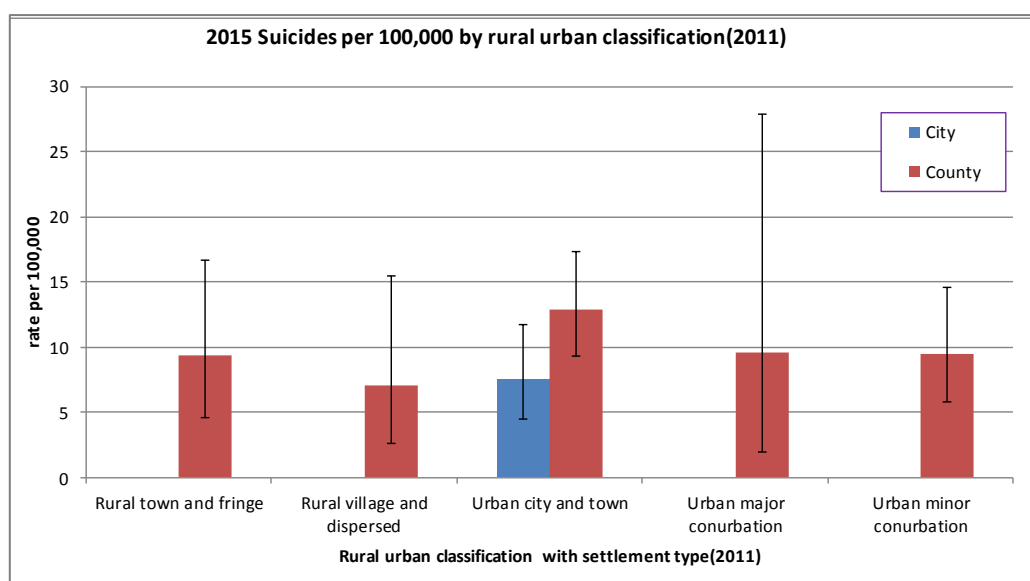
¹ Department for Communities and Local Government © Crown Copyright, 2015

Rural Urban Classification

Rural urban classification categorises geographies by physical settlement and geographic characteristics, urban areas are built up areas identified by Ordnance Survey mapping that have resident populations above 10,000 people and rural areas are those with settlements below 10,000 or open countryside³.

All of Derby City's population fall into the classification of an urban city, while Derbyshire County has a range of classifications; figure 7 shows the rates of suicide by rural urban classification for Derbyshire. There appears to be a slightly higher rate in communities categorised as urban city and town, with the lowest rate in the most rural communities.

Figure 7: Rates of deaths from suicide and undetermined injury by rural urban classification, 2015



Occupational Group

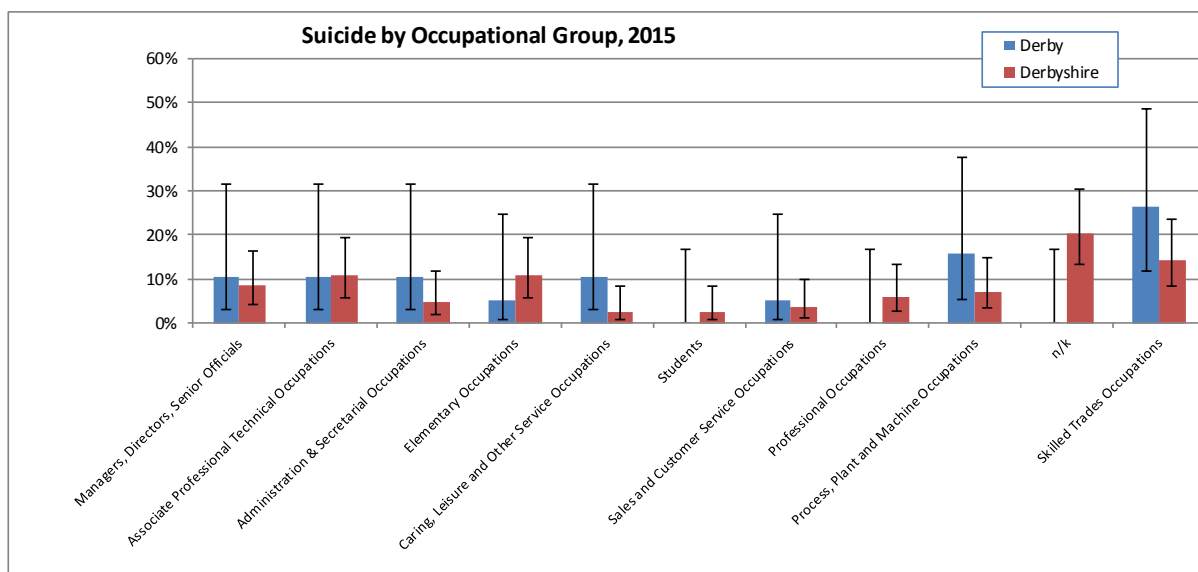
Figure 8 shows the proportion of suicides by occupational group. Occupations have been assigned using National Statistics Socio-economic Classification Group.²

In both Derbyshire County and Derby City, Skilled trade occupations had the largest proportions of deaths from suicide and undetermined injury. The small numbers in each group make interpretation difficult and a fuller discussion not possible without compromising anonymity. In addition, Derbyshire had a significant number of deaths where the occupation was not recorded.

² <http://www.esds.ac.uk/doc/4683%5Cmrdoc%5Cpdf%5Csoc2000.pdf>

³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/539133/RUCOA_leaflet_May2015v2.pdf

Figure 8: Proportion of deaths from suicide and undetermined injury by Occupational Classification Group, 2015



Source: Public Health Mortality File

Place of death

The majority of suicides occur within the home, however, a significant proportion also occur in outdoor locations and on roads and railways. The median distance travelled to these outdoor locations from the home residence is less than 5 miles.

Table 6: Place of death for deaths from suicide and undetermined injury in Derbyshire, 2015

Place of death	Number (%)
Home	56 (54.9)
Outdoors*	21 (20.6)
Public highways	2 (2.0)
Railway tracks	4 (3.9)
Hospital [†]	15 (14.7)
Rivers	4 (3.9)
Total	102 (100.0)

Source: Public Health Mortality File

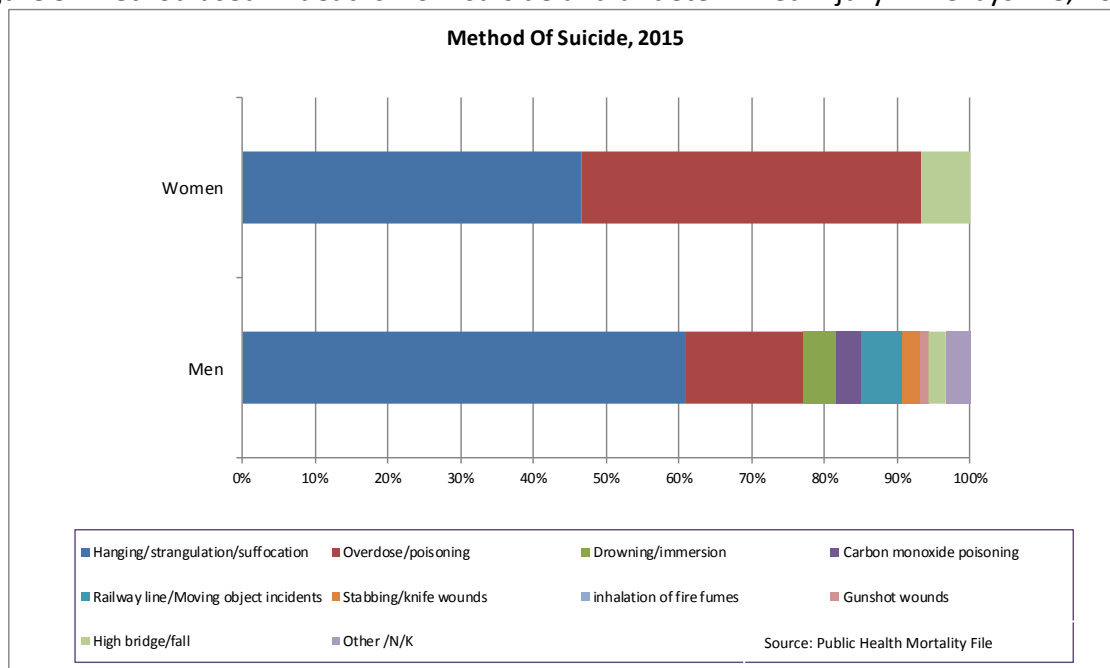
* includes locations: parks, woodlands, car parks and commercial buildings

[†] it is not possible to distinguish whether these deaths have occurred in hospital having been conveyed from another location, or whether the suicide attempt occurred within a hospital site

Method of suicide

Approximately half of the deaths in Derby City and Derbyshire County were from hanging/strangulation/suffocation, similar to the national picture. The most common method amongst men from Derbyshire who died from suicide or undetermined injury in 2015 was hanging/strangulation/suffocation (60.9% of all male deaths from suicide and undetermined injury) and for women was overdose/poisoning and hanging/strangulation/suffocation (both having the proportion of 46.9% of female deaths from suicide and undetermined injury).

Figure 9: Method used in deaths from suicide and undetermined injury in Derbyshire, 2015



Appendix 1: Deaths from suicides and undetermined injury in Derby City and Derbyshire County, 2014

The figure below has been included in this report to present age standardised rates from last year's report, updated with the revised methodology used by Public Health England from August 2016.

Figure 1: Rate of deaths from suicides and undetermined injury by Local Authority District, 2013 and 2014

