

# **Suicide in East Sussex**

## **Analysis of ONS mortality data, 2006-2013**

**Public Health Briefing**  
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# Suicide in East Sussex

## Analysis of ONS mortality data, 2006-2013

### Executive Summary

Published statistics show that the suicide rate for East Sussex residents is significantly higher than for England:

- about 50 East Sussex residents die by suicide per year
- the rate for men is higher than that for women
- East Sussex has a relatively high female suicide rate
- of the districts and boroughs, suicide rates are highest in Hastings and Eastbourne

This report analyses ONS mortality records for deaths due to suicide in East Sussex residents and non-residents during 2006-2013. In this eight year period:

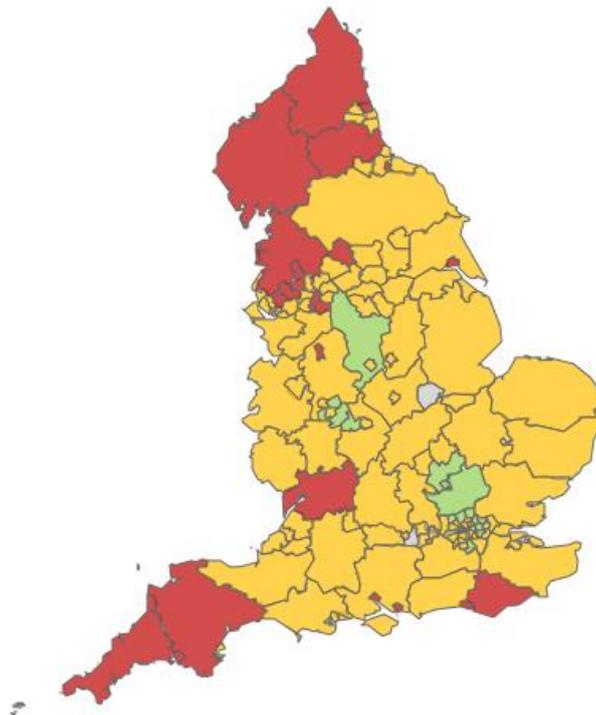
- The commonest methods of suicide for East Sussex residents were hanging, strangulation and suffocation, followed by self-poisoning (as is also the case nationally). The proportion of deaths by drowning was similar to the national rate but the proportion due to falling from a height was several times higher.
- There were high numbers of suicides by non-East Sussex residents (about 25 per year), making up about a third of all suicides occurring in the county.
- The non-residents had younger age profiles than the residents.
- Twice as many residents who lived in the most deprived quintile of areas died by suicide as those who lived in the second most deprived, and in the least deprived, quintiles.
- A third of all suicides in East Sussex occurred at Beachy Head (the coastal cliffs from Birling Gap to Holywell beach):
  - Almost 4 in every 5 of the (on average) 23 deaths that occurred each year at Beachy Head were of non-residents
  - Just under a half had a mental/behavioural disorder identified (from ICD -10 codes) as a contributory cause of death
  - Deaths at Beachy Head are highest during the summer months

## 1. Suicide rates for East Sussex residents

The Office for National Statistics (ONS) reports statistics on suicide in the UK. ONS suicide statistics are available from the Health and Social Care Information Centre (HSCIC) compendium of indicators and the Public Health Outcomes Framework (PHOF). Appendix 1 provides further detail about the data and associated definitions.

In the PHOF, both the numbers and age-standardised mortality rates from suicide and injury of undetermined intent are reported down to district/borough/unitary authority level. The rates have been age-standardised to allow populations with different age profiles to be compared. Rates are reported separately for males and females, as well as for all persons, and county and district-level rates can be compared to regional and national rates. They are presented for three-year rolling periods from 2001-2003 to 2011-2013.

**Figure 1: All persons suicide rates, by county/unitary authority, 2011-2013**



- Age-standardised suicide rates per 100,000 population were calculated using the 2013 European Standard Population for counties and unitary authorities in England.
- Areas shaded green, amber and red have significantly lower, similar and significantly higher rates of suicide, respectively, than England.
- Areas shaded grey had too few deaths for rates to be robustly determined.
- For the 148 local authorities for which rates were determined, rates ranged from 4.5 to 13.6. The median rate was 8.9 deaths per 100,000 persons. The East Sussex rate was 11.0.

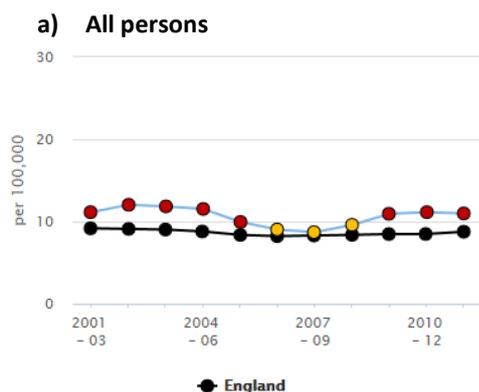
*Source: PHOF, May 2015*

Figure 1 shows a map of the county/unitary authority age-standardised suicide rates (for all persons) for 2011-2013. Areas with significantly higher rates than England are shown in red. Residents of many areas in the north (especially in the North East) have significantly higher suicide rates than England overall. In addition residents of several local authorities in the South West and several coastal authorities in the south of England, including East Sussex, also have significantly higher suicide rates than England.

In figure 2 the trends in the suicide rates for the residents of East Sussex are compared to the trends for England. Panel a) of figure 2 shows that the East Sussex suicide rate (all persons) significantly exceeded the England rate except during 2006-08 to 2008-10. The significantly higher rates in East Sussex are due to a combination of higher rates for males and substantially and significantly higher rates for females. The suicide rate for East Sussex males (panel b) exceeded the England rate at each time period shown, but was not (statistically) significantly higher in any period. There was a more noticeable drop in the rate from 2004-06 to 2006-09, and a rise from 2007-09 to 2009-11, than in England. The suicide rate for East Sussex females (panel c) rose and fell in a related way, but more steeply than for East Sussex males, and was substantially and significantly higher than the England rate in all periods except 2006-08 to 2008-10.

The male suicide rates for England and the South East are currently over three times the female rates (3.5 times and 3.2 times, respectively).<sup>1</sup> However, in East Sussex, because of the very high female rate the male suicide rate is only 2.5 times the female rate.

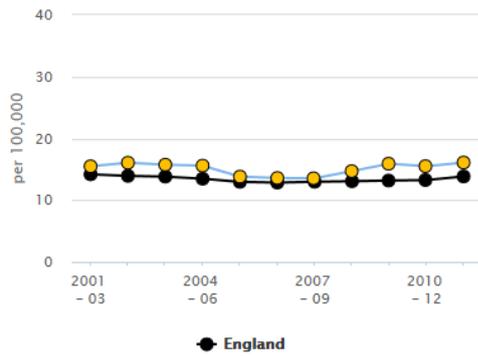
**Figure 2: Trends in the suicide rates for all persons, males and females in E. Sussex**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	163	11.2	9.5	13.0	9.0	9.2
2002 - 04	177	12.0	10.3	14.0	8.9	9.1
2003 - 05	177	11.9	10.1	13.8	8.7	9.0
2004 - 06	174	11.5	9.9	13.4	8.6	8.8
2005 - 07	154	10.0	8.4	11.7	8.2	8.4
2006 - 08	140	9.0	7.6	10.7	8.0	8.2
2007 - 09	134	8.7	7.3	10.3	8.1	8.3
2008 - 10	146	9.6	8.1	11.3	8.3	8.4
2009 - 11	167	11.0	9.3	12.8	8.5	8.5
2010 - 12	173	11.2	9.5	13.0	8.4	8.5
2011 - 13	174	11.0	9.4	12.8	8.8	8.8

Source: Public Health England (based on ONS source data)

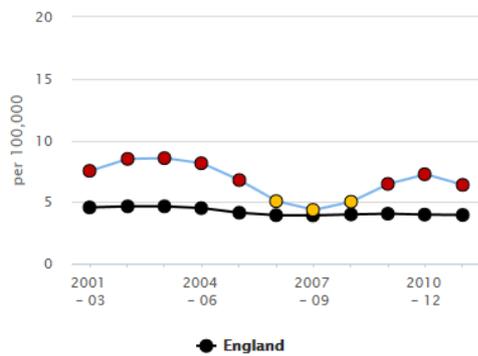
**b) Males**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	104	15.5	12.6	18.8	13.8	14.2
2002 - 04	109	16.1	13.2	19.4	13.6	13.9
2003 - 05	108	15.7	12.9	19.0	13.3	13.8
2004 - 06	108	15.6	12.8	18.9	12.8	13.5
2005 - 07	99	13.8	11.2	16.9	12.3	13.0
2006 - 08	99	13.6	11.0	16.6	12.2	12.9
2007 - 09	100	13.5	11.0	16.5	12.4	13.0
2008 - 10	108	14.7	12.0	17.8	12.7	13.1
2009 - 11	118	15.9	13.1	19.1	12.8	13.2
2010 - 12	117	15.5	12.8	18.6	12.7	13.3
2011 - 13	123	16.1	13.3	19.2	13.6	13.8

Source: Public Health England (based on ONS source data)

**c) Females**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	59	7.5	5.7	9.8	4.6	4.6
2002 - 04	68	8.5	6.5	10.8	4.6	4.7
2003 - 05	69	8.6	6.6	10.9	4.5	4.7
2004 - 06	66	8.1	6.3	10.4	4.7	4.5
2005 - 07	55	6.8	5.1	8.9	4.4	4.1
2006 - 08	41	5.1	3.6	6.9	4.1	3.9
2007 - 09	34	4.4	3.0	6.1	4.1	3.9
2008 - 10	38	5.0	3.5	6.9	4.2	4.0
2009 - 11	49	6.5	4.8	8.6	4.4	4.1
2010 - 12	56	7.3	5.5	9.4	4.3	4.0
2011 - 13	51	6.4	4.7	8.4	4.3	4.0

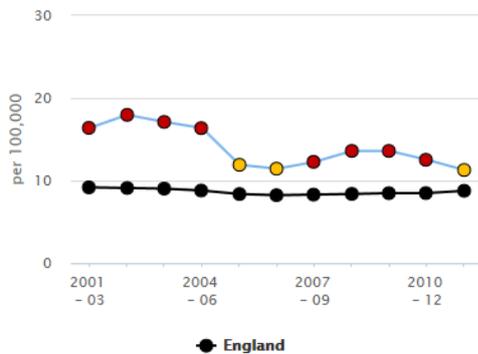
Source: Public Health England (based on ONS source data)

Age-standardised suicide rates per 100,000 population were calculated using the 2013 European Standard Population. England rates are shown in black. East Sussex rates which are similar to the England rate are shown in yellow, and those which are significantly higher are shown in red. Source: PHOF, July 2015

In figure 3 the trends in the suicide rates for the residents of the districts and boroughs of East Sussex are shown.

**Figure 3: Trends in the suicide rates for residents of East Sussex districts and boroughs**

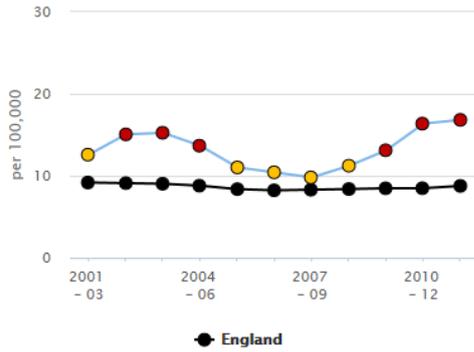
**a) Eastbourne**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	44	16.4	11.8	22.1	9.0	9.2
2002 - 04	49	18.0	13.2	23.9	8.9	9.1
2003 - 05	48	17.1	12.5	22.8	8.7	9.0
2004 - 06	46	16.4	11.9	21.9	8.6	8.8
2005 - 07	34	11.9	8.2	16.7	8.2	8.4
2006 - 08	32	11.4	7.8	16.2	8.0	8.2
2007 - 09	34	12.3	8.5	17.2	8.1	8.3
2008 - 10	38	13.6	9.6	18.7	8.3	8.4
2009 - 11	39	13.6	9.6	18.6	8.5	8.5
2010 - 12	36	12.5	8.8	17.4	8.4	8.5
2011 - 13	33	11.3	7.7	15.9	8.8	8.8

Source: Public Health England (based on ONS source data)

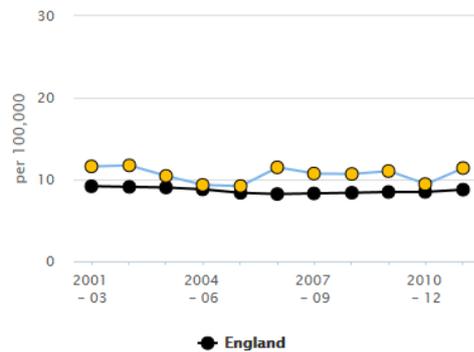
**b) Hastings**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	31	12.6	8.5	17.9	9.0	9.2
2002 - 04	37	15.1	10.6	20.8	8.9	9.1
2003 - 05	38	15.3	10.8	21.0	8.7	9.0
2004 - 06	35	13.7	9.5	19.1	8.6	8.8
2005 - 07	29	11.0	7.4	15.9	8.2	8.4
2006 - 08	28	10.4	6.9	15.1	8.0	8.2
2007 - 09	27	9.8	6.4	14.3	8.1	8.3
2008 - 10	30	11.2	7.6	16.1	8.3	8.4
2009 - 11	34	13.1	9.1	18.4	8.5	8.5
2010 - 12	42	16.4	11.8	22.2	8.4	8.5
2011 - 13	44	16.8	12.2	22.6	8.8	8.8

Source: Public Health England (based on ONS source data)

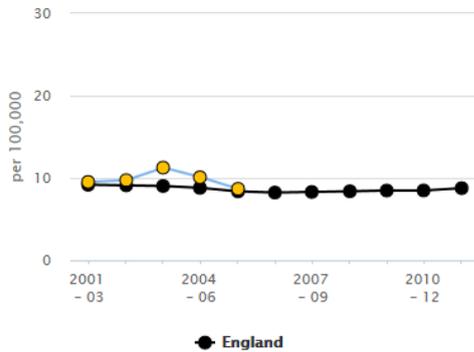
**c) Lewes**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	30	11.6	7.8	16.7	9.0	9.2
2002 - 04	30	11.7	7.8	16.9	8.9	9.1
2003 - 05	27	10.4	6.8	15.3	8.7	9.0
2004 - 06	26	9.3	6.1	13.7	8.6	8.8
2005 - 07	26	9.2	6.0	13.5	8.2	8.4
2006 - 08	32	11.5	7.8	16.3	8.0	8.2
2007 - 09	30	10.7	7.2	15.4	8.1	8.3
2008 - 10	31	10.7	7.2	15.2	8.3	8.4
2009 - 11	33	11.0	7.6	15.6	8.5	8.5
2010 - 12	29	9.5	6.3	13.6	8.4	8.5
2011 - 13	34	11.4	7.9	16.0	8.8	8.8

Source: Public Health England (based on ONS source data)

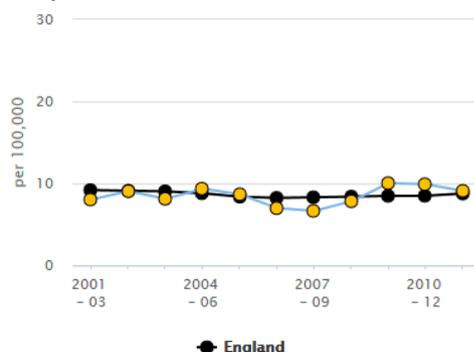
**d) Rother**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	25	9.5	6.0	14.3	9.0	9.2
2002 - 04	25	9.7	6.1	14.6	8.9	9.1
2003 - 05	31	11.3	7.4	16.3	8.7	9.0
2004 - 06	29	10.1	6.5	14.8	8.6	8.8
2005 - 07	28	8.7	5.6	12.8	8.2	8.4
2006 - 08	17	*	-	-	8.0	8.2
2007 - 09	15	*	-	-	8.1	8.3
2008 - 10	15	*	-	-	8.3	8.4
2009 - 11	19	*	-	-	8.5	8.5
2010 - 12	21	*	-	-	8.4	8.5
2011 - 13	20	*	-	-	8.8	8.8

Source: Public Health England (based on ONS source data)

**e) Wealden**



Period	Count	Value	Lower CI	Upper CI	South East	England
2001 - 03	33	8.0	5.5	11.3	9.0	9.2
2002 - 04	36	9.1	6.3	12.7	8.9	9.1
2003 - 05	33	8.1	5.5	11.5	8.7	9.0
2004 - 06	38	9.4	6.5	13.0	8.6	8.8
2005 - 07	37	8.7	6.1	12.0	8.2	8.4
2006 - 08	31	7.0	4.7	10.0	8.0	8.2
2007 - 09	28	6.7	4.4	9.7	8.1	8.3
2008 - 10	32	7.8	5.3	11.2	8.3	8.4
2009 - 11	42	10.0	7.2	13.7	8.5	8.5
2010 - 12	45	9.9	7.2	13.3	8.4	8.5
2011 - 13	43	9.1	6.5	12.3	8.8	8.8

Source: Public Health England (based on ONS source data)

Age-standardised suicide rates per 100,000 population were calculated using the 2013 European Standard Population. England rates are shown in black. District/borough rates, which are similar to the England rate, are shown in yellow; those which are significantly higher are shown in red. Rates are only calculated for areas with 25 or more deaths in the three year period. Source: PHOF, July 2015

Figure 3 shows that the suicide rates in Hastings and Eastbourne have been significantly higher than the England rate for most of the time periods shown, whereas in Lewes, Rother (where they can be reliably determined) and Wealden they have been similar to the England rate.

At district and borough level, the numbers of female suicides are too small to reliably determine the suicide rate. This is also true for males in all districts and boroughs except Eastbourne. Eastbourne has had a significantly higher suicide rate (all persons) than England between 2007-09 and 2010-12. However, the rate of suicides in males was only significantly higher than the England rate in 2008-10. Hence we can infer that a high female suicide rate must have contributed to the overall rate in Eastbourne, at least in the periods 2007-09, 2009-11 and 2010-12 (when the male rate was not significantly higher than the England rate) (see figure 3, panel a).

In Hastings, which has a smaller population than Eastbourne, no trend data for males (or females) is available.

## 2. Suicides in East Sussex (residents and non-residents)

The county of East Sussex contains a major international suicide “hotspot”, Beachy Head, so when considering the burden of suicide in this county it is particularly important to consider non-residents who die by suicide in East Sussex as well as suicides of East Sussex residents. Therefore, in this report ONS mortality records for both these groups were analysed.

- Deaths by suicide of East Sussex residents aged 15 and over are referred to as resident deaths.
- Deaths by suicide of non-East Sussex residents aged 15 and over who died in East Sussex are referred to as non-resident deaths.

Records for deaths that occurred during the calendar years 2006-2013 inclusive (an eight year period) were downloaded from the PCMD on 12/12/2014. For local intelligence on suicide it was deemed more appropriate to analyse the data by time of death rather than time of death registration (see Appendix).

The median number of days between death and death registration for East Sussex deaths due to suicide occurring in 2006-2013 was 192 days, with about 10% of these deaths not being registered until more than a year after the death occurred. In contrast, the median value for all other (non-suicide) deaths was 3 days and 90% of these deaths were registered within 10 days. Note therefore that there are likely to be more deaths by suicide to add to the numbers reported below, especially in the more recent years (because some deaths due to suicide occurring during 2006-2013 had not been registered and/or loaded onto the PCMD by 12/12/2014, when the dataset analysed here was downloaded).

Where data are presented by cause of death they have been classified according to the ICD-10 codes corresponding to the underlying cause of death. Note that deaths at Beachy Head and at other coastal cliff locations have been separately classified by place of death. However, the description of the place of death does not necessarily distinguish cliff deaths from beach or sea deaths.

## 2.1 Suicide by gender and age

As shown in table 1, over the 8 year reporting period there were on average 77 suicides per year, one third of which were of non-East Sussex residents. The numbers of suicides ranged from 58 (in 2006) to 94 (in 2010). Non-resident deaths accounted for between 20% (2006) and 40% (2012) of suicides.

**Table 1: Numbers of suicides of residents and non-residents**

	2006	2007	2008	2009	2010	2011	2012	2013	Total	Annual average
<b>Residents</b>	46	44	60	39	62	54	56	50	411	51
<b>Non-residents</b>	12	17	28	23	32	26	36	30	204	26
<b>Total</b>	58	61	88	62	94	80	92	80	615	77

It is worth noting that not only do a large number of non-residents die by suicide in East Sussex, there is also a high burden resulting from the substantially and significantly higher suicide rate for East Sussex residents than for England.

Over 90% of the suicides of East Sussex residents (380 of the 411 deaths) occurred in the county of East Sussex. About half of the 31 out-of-county deaths occurred in hospital, and almost all of these were in hospitals near the county boundaries.<sup>i</sup> ONS mortality records only reveal the place of death, not where the suicide was initiated. It is likely that most of the hospital deaths were of people who initiated suicide in East Sussex, but who were taken to hospitals just outside the county (because these were the nearest hospitals), where they later died.

It is important to note that not all of the inquests into the 615 deaths that are the subject of this report were held by the East Sussex coroner. Overall 6% of them (38 deaths) were held by coroners in other areas. Although the majority of the inquests into the deaths of non-residents were held by the East Sussex coroner, about 7% of them were held by the coroner in the area where the deceased had lived. Inquests into the deaths of residents who died in the county were generally held by the East Sussex coroner, but most of the resident deaths occurring outside the county were held by the coroner for the area where the death occurred. Any local suicide audit which gathers details of suicides from the records of the local coroner will therefore fail to capture the details of the minority of deaths that are subject to inquest outside the local area.

<sup>i</sup> There are hospitals just outside East Sussex in Brighton, Haywards Heath and Tunbridge Wells.

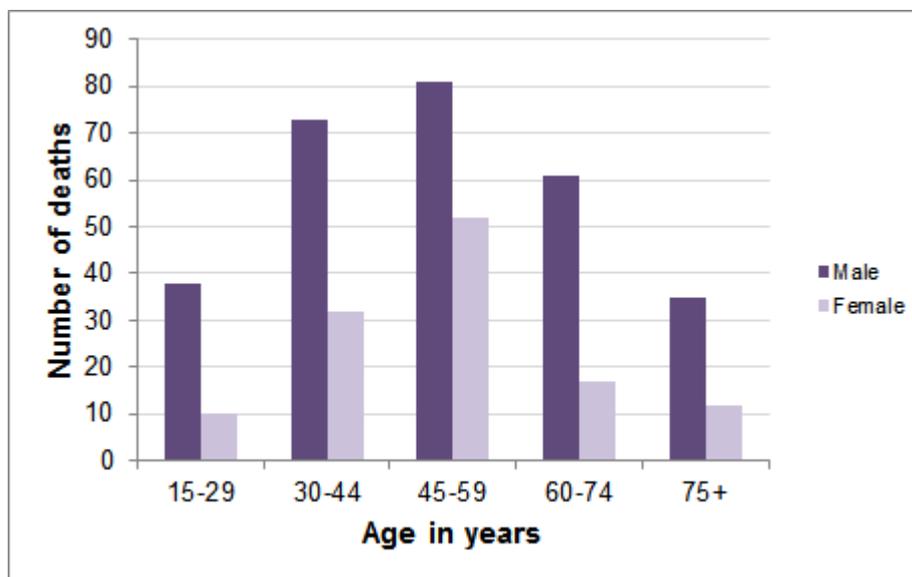
In 2013, of the suicides in people aged 15 and over registered in the UK, males accounted for 78% and females for 22%.<sup>1</sup> As shown in table 2, the gender split for suicides by non-East Sussex residents (occurring in 2006 to 2013) was similar to that for all suicides in the UK (2013 death registrations). However, in the case of East Sussex residents the proportion of males was noticeably lower. This latter finding is unsurprising, given that the suicide rate for female East Sussex residents is substantially and significantly higher than the national rate.

**Table 2: Suicide by gender for East Sussex residents and non-residents**

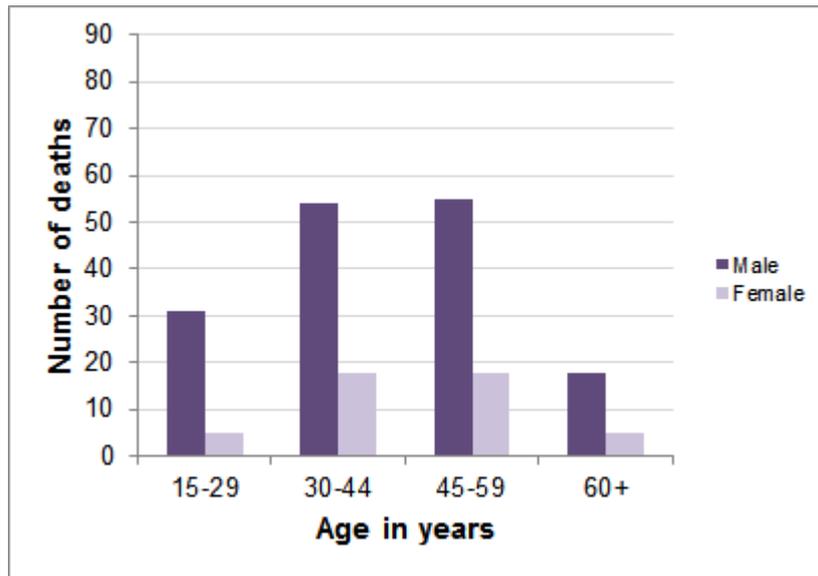
	Male	Female	All people	Male	Female
<b>Residents</b>	288	123	411	70%	30%
<b>Non-residents</b>	158	46	199	77%	23%
<b>Total</b>	446	169	610	73%	27%

Figures 4 and 5 show the number and age distribution of resident and non-resident males and females who died by suicide. Both charts highlight the greater numbers of male than female deaths. Box plots of the same data make differences in the age distributions easier to visualise; figure 6 shows that, for both males and females, the age profiles of the non-residents are younger than the residents.

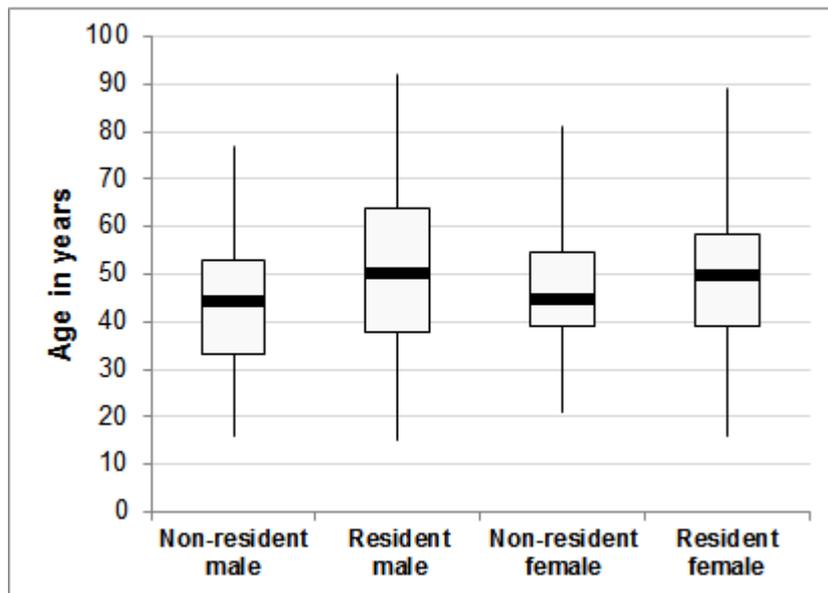
**Figure 4: Gender and age of East Sussex residents who died by suicide**



**Figure 5: Gender and age of non-East Sussex residents who died by suicide**



**Figure 6: Age profiles of people who died by suicide**



Boxplots show the range of values in an ordered dataset. In these boxplots the lower and upper ends of the vertical lines show the minimum and maximum ages, and the bold horizontal bar shows the median age, at death. The box shows the interquartile range. This is the range occupied by the middle 50% of values; it provides a picture of the dataset minus the extreme values.

## 2.2 Methods of suicide

The ONS reported that in 2013 the two commonest methods of suicide among men in the United Kingdom were 'hanging, strangulation and suffocation', followed by 'self-poisoning'. In recent years the percentages of both men and women who use hanging, strangulation and suffocation as the method of suicide have been

increasing. Prior to 2013 self-poisoning was the commonest method of suicide for women.<sup>1</sup> However, in 2013, for the first time hanging strangulation and suffocation, was also the commonest method of suicide for women. This data is summarised in table 3.

**Table 3: Methods of suicide in the UK, deaths registered 2013**

	% men	% women
<b>Hanging, strangulation and suffocation</b>	56.1	40.2
<b>Self-poisoning</b>	20.2	38.2
<b>Drowning</b>	4.1	6.3
<b>Fall and fracture</b>	3.3	4
<b>Other</b>	16.3	11.3

*Source: ONS (2015)*

A summary of the ONS mortality data (for the 8 year reporting period) for East Sussex residents, and for non-residents who died in East Sussex is presented in table 4. For resident males hanging, strangulation and suffocation was the commonest method and self-poisoning was the next commonest. For resident females self-poisoning was the commonest method, although only slightly higher than suicide by hanging, strangulation and suffocation. For residents the percentage of deaths due to drowning was similar to the national value.

Table 4 shows that falling from a height was a much commoner method of suicide for East Sussex residents (accounting for 14% of resident deaths) than for people in the UK (less than 4% of UK suicides). The percentage of deaths due to hanging, strangulation and suffocation was smaller, and the percentage due to falling from a height was greater, for East Sussex males than for UK males.

**Table 4: Methods of suicide for East Sussex residents and non-residents who died in the county, during 2006-2013**

	Residents			Non-residents		
	% men	% women	% people	% men	% women	% people
<b>Hanging, strangulation and suffocation</b>	45.1	30.9	40.9	7.6	8.7	7.8
<b>Self-poisoning</b>	22.6	34.1	26.0	5.7	0.0	4.4
<b>Fall from a height</b>	12.5	17.9	14.1	71.5	76.1	72.5
<b>Drowning</b>	2.8	8.1	4.4	-	-	3.9
<b>Other</b>	17.0	8.9	14.6	-	-	11.3

*Some values have been suppressed and these are indicated by –*

The pattern of deaths for non- residents is very different to that of East Sussex residents and also the UK, with almost three-quarters of non-resident deaths being due to falling from a height. These data reflect suicide tourism to Beachy Head which

is a major international suicide “hotspot”. Analysis of deaths due to suicide at Beachy Head is considered separately in a later section of this report.

### 2.2.1 Deaths due to hanging, strangulation and suffocation

There were 183 deaths due to hanging, strangulation and suffocation; 91% of these (168 deaths) were resident deaths. Males accounted for about three-quarters (77%) of resident deaths due to hanging, strangulation and suffocation, and females for about a quarter (23%).

This method accounted for 45% of the suicides of East Sussex male residents. The commonest places of death recorded for men were:

- About two thirds at home
- 8% other residential addresses
- 6% in woodland
- 6% in hospital<sup>ii</sup>

Death due to hanging, strangulation and suffocation accounted for about 30% of the suicides of East Sussex female residents. The commonest places of death recorded for women were:

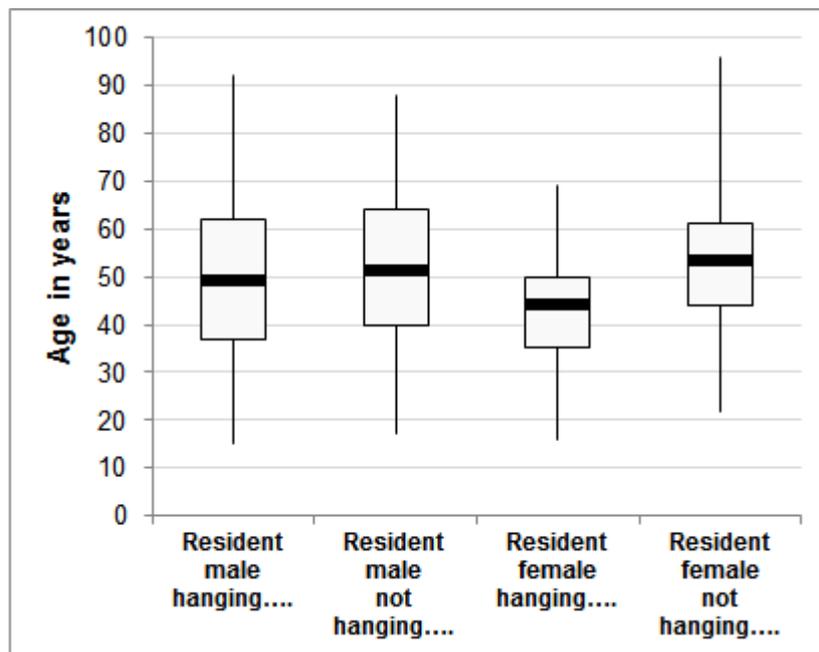
- over 70% at home;
- 13% in hospital<sup>ii</sup>.

Box plots, shown in figure 7, are used to compare the age profiles of male and female residents who died by hanging, strangulation and suffocation with the age profiles of those who died by other methods. They show that the male residents who died in this way had a slightly younger age profile than those who died by other methods. However, the age profile of the female residents who died by hanging, strangulation and suffocation was considerably younger than those who died by other methods. Female residents who died by hanging, strangulation and suffocation also had a younger age profile than the male residents who died in this way.

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<sup>ii</sup> It is unknown whether suicide took place in hospital or whether it was initiated elsewhere but death occurred after hospital admission.

**Figure 7: Age profiles of people who died by hanging, strangulation and suffocation**



Hanging... refers to hanging, strangulation and suffocation. Boxplots show the range of values in an ordered dataset. In these boxplots the lower and upper ends of the vertical lines show the minimum and maximum ages, and the bold horizontal bar shows the median age, at death. The box shows the interquartile range. This is the range occupied by the middle 50% of values; it provides a picture of the dataset minus the extreme values.

### 2.2.2 Deaths due to self-poisoning

There were 116 deaths due to self-poisoning; 92% of these (107 deaths) were resident deaths. Males accounted for about 3 in every 5 (61%) resident deaths due to self-poisoning, and females for about 2 in every 5 (39%).

This method accounted for 23% of suicides amongst male residents. The commonest places of death recorded for men were:

- About two thirds of deaths at home
- 9% in hospital<sup>ii</sup>
- 6% at other residential addresses

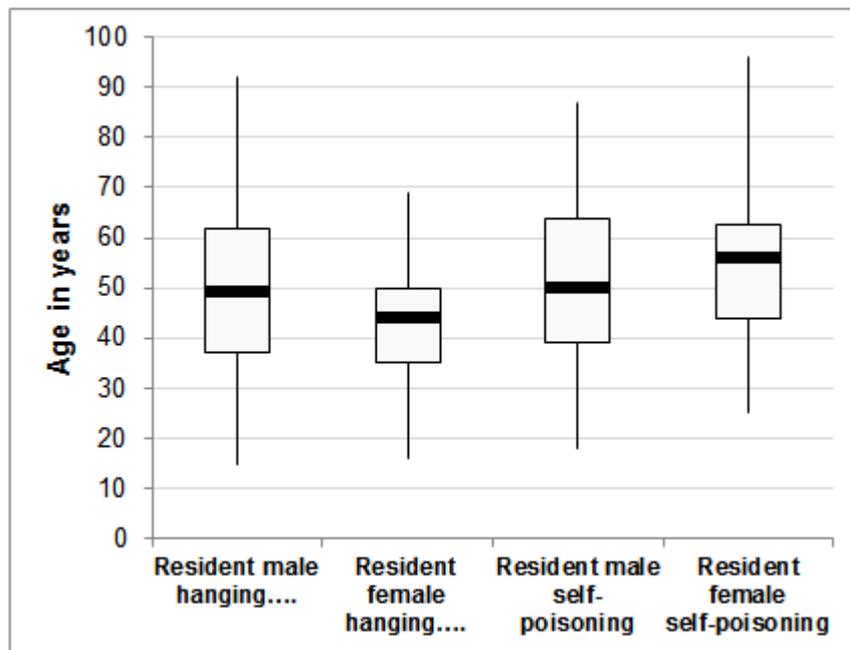
Death due to self-poisoning accounted for 34% of suicides amongst female residents. The commonest places of death recorded for women were:

- 81% of deaths at home
- 14% in hospital<sup>ii</sup>

As shown in figure 8, resident males who died due to self-poisoning had a similar age profile to those who died due to hanging, strangulation and suffocation. But resident females who died due to self-poisoning had a considerably older age profile than those who died due to hanging, strangulation, suffocation, with a difference of

over 10 years in their median ages. They also had an older age profile than the male residents who died by self-poisoning.

**Figure 8: Age profiles of people who died by hanging, strangulation and suffocation or self-poisoning**



Hanging.... refers to hanging, strangulation and suffocation. Boxplots show the range of values in an ordered dataset. In these boxplots the lower and upper ends of the vertical lines show the minimum and maximum ages, and the bold horizontal bar shows the median age, at death. The box shows the interquartile range. This is the range occupied by the middle 50% of values; it provides a picture of the dataset minus the extreme values.

### 2.2.3 Deaths due to drowning and submersion

There were 26 deaths due to drowning and submersion; 18 (70%) of these were East Sussex residents, 8 of whom were males.

### 2.2.4 Deaths due to jumping or lying before a moving object

There were 16 deaths due to jumping or lying before a moving object, all of which were East Sussex residents: 9 were males and 7 were females. Almost all of these deaths occurred at railway stations, level crossings or railway lines; 3 of them occurred at Hampden Park station.

### 2.2.5 Deaths due to firearm discharge

All those who died due to firearm discharge were male and 14 of them (almost all of them) were East Sussex residents. These 14 male residents had a notably older age profile than resident males who died by self-poisoning or by hanging, strangulation and suffocation, with a median age at death of 63 years.

### 3. Suicide at Beachy Head

In this report Beachy Head is defined as the whole coastal area of cliffs spanning from Birling Gap in the west to Holywell beach in the east. A map of this area is shown in figure 9.

Figure 9: Map of Beachy Head



In addition to the cliffs at Beachy Head, there are other coastal cliffs in East Sussex and a few inland ‘cliff’ sites (resulting from chalk quarrying). In table 5 the numbers of suicides that occurred at Beachy Head and at other coastal cliff sites in East Sussex are compared for residents and non-residents.

Table 5: Suicides occurring at coastal cliff locations in East Sussex

Place of death	Residents	Non-residents	All people
Beachy Head	39	147	186
Other coastal cliff sites	20	25	45
Other East Sussex locations	321	32	353
All East Sussex locations	380	204	584

In the 8 year reporting period (2006-2013) deaths at Beachy Head accounted for 32% (186 of the 584) of all suicides occurring in East Sussex; they accounted for 72% of non-resident deaths (147 of 204) and 10% (39 of 380) of the resident deaths in the county.

Deaths at other East Sussex coastal cliff sites accounted for a further 8% (45 of 584) of suicides occurring in the county; they accounted for 12% of non-resident deaths and 5% of the resident deaths in the county.

Overall, deaths of non-residents accounted for 79% of all suicides at Beachy Head (147 out of 186 deaths), and 56% of all suicides occurring at other cliffs in East Sussex (25 out of 45 deaths).

The numbers of suicide per year at Beachy Head are summarised in table 6. For the 8 year reporting period, there were on average 23 suicides per year, with deaths of non-residents accounting for nearly 4 in every 5 deaths. In the last 4 years of this 8 year period the annual numbers of deaths at Beachy Head have been between 25 and 31; this equates to an average of over 2 deaths per month.

**Table 6: Annual suicides at Beachy Head, 2006 to 2013**

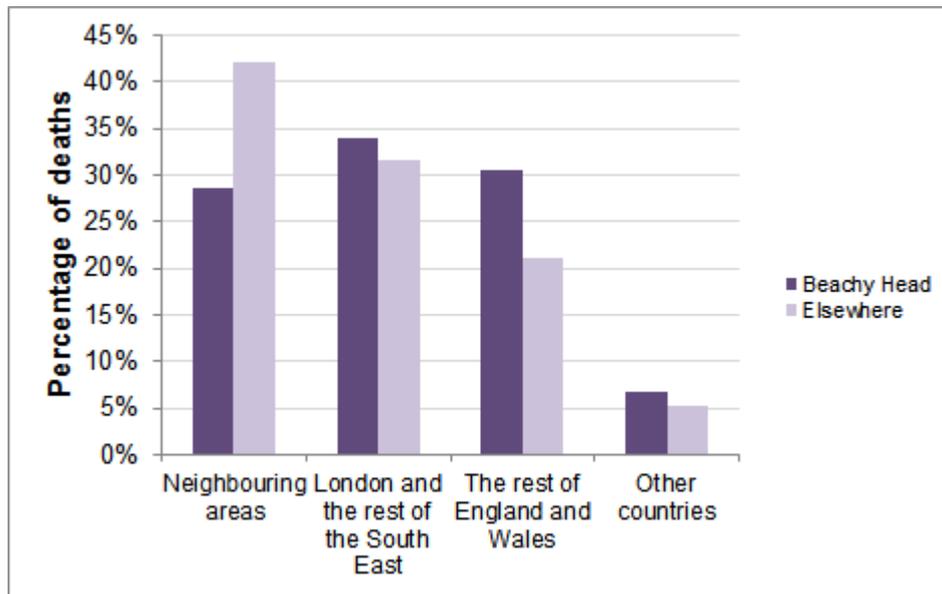
	2006	2007	2008	2009	2010	2011	2012	2013	Total	Annual average
<b>Non-residents</b>	6	11	20	18	23	22	28	19	147	18
<b>Residents</b>	3	7	8	4	4	4	3	6	39	5
<b>Total</b>	9	18	28	22	27	26	31	25	186	23

To put these numbers into a national perspective, there were an average of eight fatal falls per year from Clifton suspension bridge (another well-known public place where people take their lives by suicide) in the period 1994-1998, and an average of three per year by 2008-2011 following the erection of physical barriers to jumping/falling (in the late 1980s).<sup>2</sup>

Analysis of the underlying causes of death reveal that more than 96% of deaths at Beachy Head were due to jumping or falling from the cliffs, but a small but detectable minority (less than 4%) were due to other causes (data not shown).

Figure 10 compares the area of residence of the non-residents who died at Beachy Head with those who died elsewhere in the county. This indicates that people travel longer distances to die by suicide at Beachy Head than to die by suicide elsewhere in East Sussex. Of the 13 non-residents who came to East Sussex from countries outside England and Wales, 10 died at Beachy Head and the other 3 at other coastal cliff sites in the county.

**Figure 10: Area of residence of non-residents who died by suicide in East Sussex (Beachy Head and elsewhere)**



The neighbouring areas are East Sussex, Kent, Brighton and Hove, West Sussex and Surrey.

#### 4. When do suicides occur?

Figure 11 shows the numbers of suicides of residents and non-residents that occurred in the county by month of the year. In both cases there is seasonality to the pattern, with more deaths occurring in the summer months and, in the case of residents, January.

**Figure 11: Occurrence of suicides in East Sussex by month of the year**

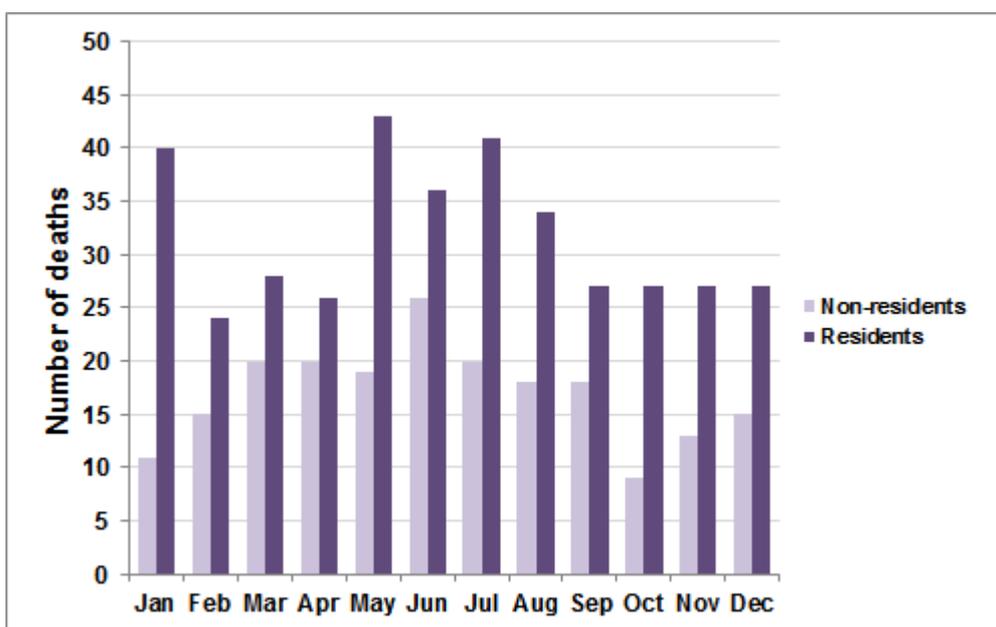


Figure 12 shows the numbers of suicides at Beachy Head by month of the year. As for all suicides, there is a seasonal pattern, with numbers rising from the spring, reaching their peak in May-July and falling until winter. There are also relatively high numbers of deaths in February and December.

**Figure 12: Occurrence of suicides at Beachy Head by month of the year**

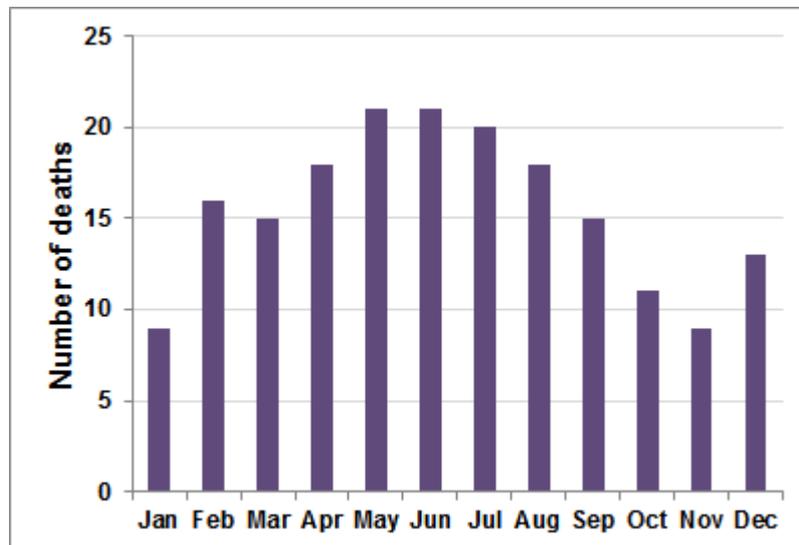


Figure 13 shows the numbers of suicides of residents and non-residents that occurred in the county by day of the week. There are different patterns for residents and non-residents. Resident suicides occur least frequently on Saturdays. The frequency rises on Sundays and Mondays and peaks on Tuesdays, then falls on Wednesdays and Thursdays. For non-residents there are least suicides on Tuesdays.

**Figure 13: Occurrence of suicides in East Sussex by day of the week**

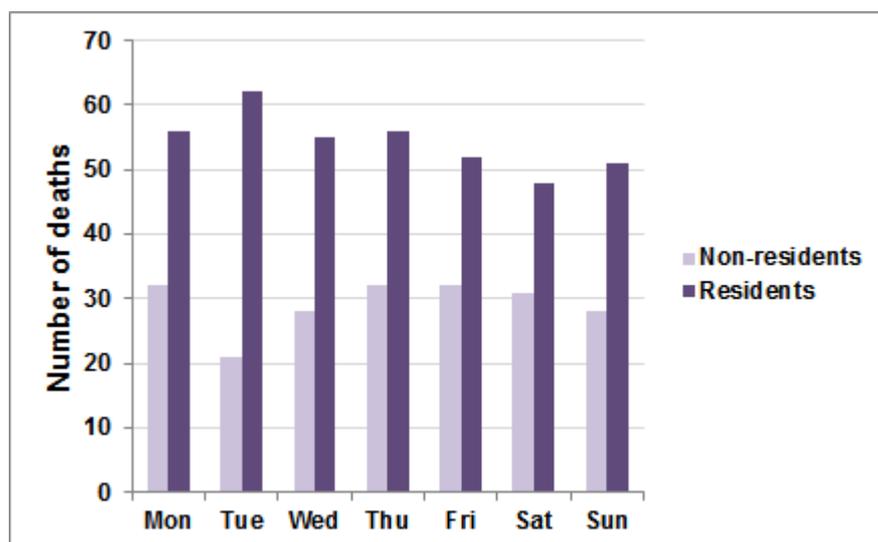
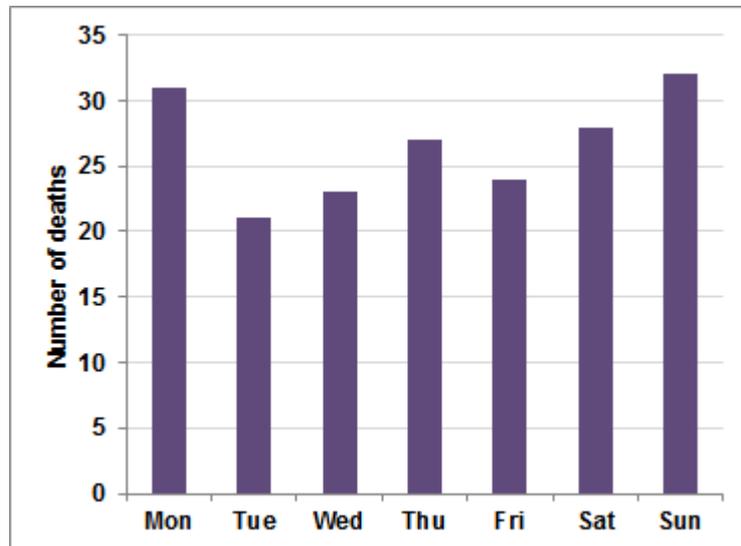


Figure 14 shows the numbers of suicides at Beachy Head by day of the week. Suicides peak on Sundays and are at their lowest on Tuesdays. However, the

distributions of deaths by day of the week are quite different for residents and non-residents (data not shown). Non-resident deaths are most frequent on Mondays and Thursdays and least frequent on Tuesdays. Resident deaths, which are relatively low in number, are most frequent on Sundays and least frequent on Thursdays.

**Figure 14: Occurrence of suicides at Beachy Head by day of the week**



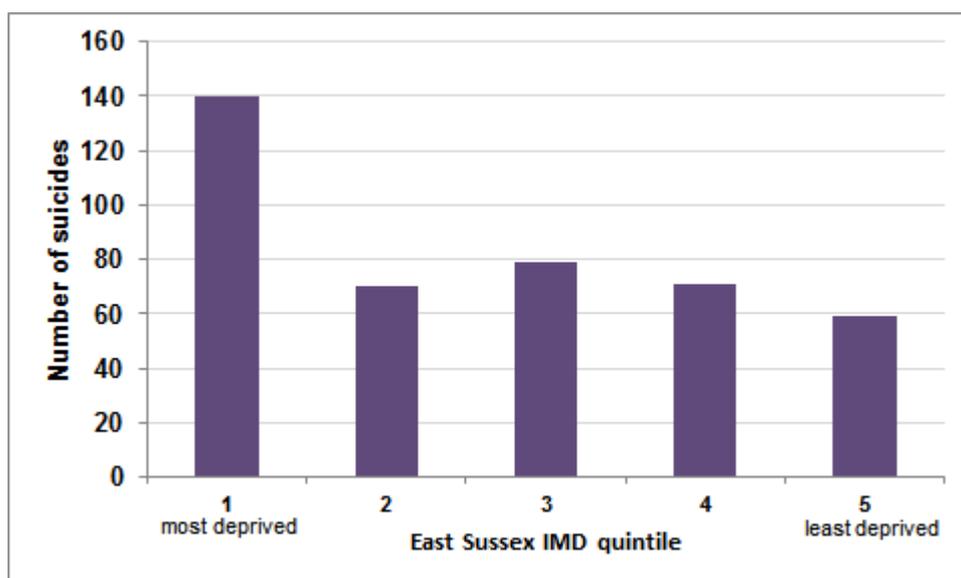
## 5. Area deprivation and suicide

Some studies have shown a link between socio-economic deprivation and suicide. For example, in 2006 the ONS reported that suicide rates for both men and women in England and Wales in 1999-2003 increased with increasing area deprivation. The rate for women living in the most deprived 5% of areas was twice that for women living in the least deprived 5% of areas, and for men the differential was even greater.<sup>3</sup> More recently, in a publication which is aimed at understanding more about why disadvantaged men in mid-life are at greater risk of suicide, the Samaritans have reviewed the wider economic perspective on suicide. They note that the results of area-based analyses are mixed, with some studies finding a significant impact of area deprivation on suicide rates but others finding no significant association.<sup>4</sup>

An analysis of resident deaths from suicide by deprivation quintiles is presented in figure 15.<sup>iii</sup> Overall people who lived in the most deprived 20% of East Sussex lower super output areas (IMD quintile 1) accounted for a third of all resident suicides. There were less than half this number of deaths for residents living in the least deprived 20% of areas (IMD quintile 5), as well as for residents living in the second most deprived 20% of areas (IMD quintile 2).

<sup>iii</sup> For this analysis East Sussex area deprivation quintiles were assigned to the lower super output areas (LSOAs) of residence of the deceased. This was done using the Index of Multiple Deprivation, 2010 (IMD 2010) scores (see <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010>).

**Figure 15: Area deprivation for East Sussex residents who died by suicide**



## 6. Contributory causes of death

Suicide risk is most commonly associated with mental illness and there is broad agreement that about 90% of individuals who die by suicide have a mental illness.<sup>5</sup> However, in some cases, the condition may not have been formally diagnosed by a clinician.

ONS mortality files record information on both the underlying and contributory causes of death. For the people who died by suicide in East Sussex during 2006-2013, the most commonly cited contributory cause of death was mental and behavioural disorders<sup>iv</sup>. However, as shown in table 7, this was recorded as a contributory cause of death for fewer than half of the individuals (48% of residents and 42% of non-residents).

**Table 7: Numbers and percentages of deaths by suicide at Beachy Head where mental and behavioural disorders were recorded as contributory causes of death**

	Mental and behavioural disorders recorded		Mental and behavioural disorders not recorded		Mental and behavioural disorders recorded as a contributory cause of death (%)		
	Beachy Head	Elsewhere	Beachy Head	Elsewhere	Beachy Head	Elsewhere	Total
<b>Non-residents</b>	64	22	83	35	44%	39%	42%
<b>Residents</b>	22	160	17	181	56%	47%	48%

As shown in table 7, mental and behavioural disorders were recorded as a contributory cause of death for a higher percentage of both residents and non-residents who died by suicide at Beachy Head than elsewhere in East Sussex.

<sup>iv</sup> Mental and behavioural disorders were identified using all ICD-10 codes with the prefix F (mental and behavioural disorders) or the code Z915 (history of self-harm).

Overall mental and behavioural disorders were recorded as a contributory cause of death for 54% (31) of residents who died by jumping or falling from a high place, 51% (79) of those who died by hanging, strangulation and suffocation, and 45% (45) of those who died by self-poisoning (data not shown). As jumping or falling from a height is the most likely of these methods to be lethal and self-poisoning is the least likely, this suggests a link between the lethality of the method of suicide and the likelihood of mental and behavioural disorders being recorded as a contributory cause of death.

## Appendix: Data sources and definitions

The Office for National Statistics (ONS) reports statistics on suicide in the UK. ONS suicide statistics are available from the Health and Social Care Information Centre (HSCIC) compendium of indicators (<http://nwww.hscic.gov.uk/indicatorportal>) and the Public Health Outcomes Framework (PHOF) (see <http://www.phoutcomes.info/>). In both of these compendia, national, regional and local (county, unitary authority and district level) data are reported. It is important to note that data published at a local level relates only to residents of the local area. The ONS also publishes other reports based on their analysis of national and regional suicide data, including annual statistical bulletins on suicides in the UK. The latest of these bulletins considers the data on deaths registered in 2013.<sup>1</sup>

ONS suicide statistics are based on mortality records where the underlying cause of death is intentional self-harm or injury/poisoning of undetermined intent. The latter category is included in suicide data (in England and Wales) because it is assumed that most deaths due to injury or poisoning of undetermined intent are actually due to self-inflicted harm, but the evidence to prove deliberate intent is insufficient. This assumption is not applied to children, since accident, neglect or abuse might be alternative causes of some deaths of undetermined intent. For this reason statistics on suicide are only reported for people aged 15 years and over.

The ONS receives mortality files from local registrars and matches clinical codes to the underlying and contributory causes of death, using the International Classification of Diseases, Tenth Revision (ICD-10) (<http://www.ons.gov.uk/ons/guide-method/classifications/international-standard-classifications/icd-10-for-mortality/index.html>).

The ICD-10 clinical codes used to define suicide are:

- X60 – X84 Intentional self-harm
- Y10 – Y34 Injury/poisoning of undetermined intent, excluding Y33.9 ‘coroner’s verdict pending’ for deaths registered prior to 2007. (Since 2007 ‘coroner’s verdict pending’ has been coded instead by U50.9.)

The majority of coroner’s inquests end with a ‘short form’ verdict, such as accident, death by misadventure, natural causes, suicide or homicide. But coroners can alternatively choose to express their conclusions on the cause of death using narrative verdicts. Narrative verdicts are used in a range of circumstances, with about half of them (in the 2012 death registration year) relating to deaths due to diseases and the other half relating to deaths due to external causes. The extent to which narrative verdicts are used varies from coroner to coroner and region to region.<sup>6</sup> ‘Short form’ verdicts of suicide or open verdict are straightforward to code to the ICD-10 categories X60-84 and Y10-34. However narrative verdicts where the coroner has not clearly specified the intent or the mechanism of death are termed

'hard-to-code'. According to the ONS coding rules, any 'hard-to-code' narrative verdicts where the intent has not been clearly specified must be coded as accidents.

Not only has there been a dramatic increase in the use of narrative verdicts in England (from about 100 in 2001 to over 3,000 in 2010), but the proportion that are 'hard-to-code' has also risen dramatically (from less than 1% in 2001 to over 10% in 2010). At the beginning of 2010 the ONS gave additional guidance to their coding team and provided advice to coroners on the types of narrative verdicts that are 'hard-to-code'. The following year saw a substantial (46%) drop in the number of 'hard-to-code' narrative verdicts, but the number increased somewhat (by 20%) the year after.<sup>6</sup>

For deaths registered in 2012, 8.7% of suicide verdicts in England and Wales were narrative verdicts. In the South East there were 714 deaths due to suicide in that year; assuming the same proportion of narrative verdicts were used as nationally, about 60 of these deaths are likely to be narrative verdicts. In addition, 'hard-to-code' narrative verdicts may have accounted for a further 18 deaths due to suicide in the South East. Based on these numbers we would expect about 5 narrative verdicts per year for East Sussex resident suicides. When compiling a suicide audit dataset from local coroner's records it is important to check the details of inquests resulting in narrative verdicts as well as those resulting in 'short form' suicide and open verdicts.

Almost all mortality statistics published by the ONS, including suicide statistics, are presented by year of death registration rather than by year of death. Deaths in the UK are normally registered within five days of death. However legislation in England and Wales dictates that, if a death is referred to a coroner and he/she holds an inquest, it cannot be registered until the inquest is completed. In these cases, the delay can be considerable as some inquests are not concluded until months later. However, more than 95% of deaths in the UK are registered in the year of occurrence. Therefore publication of statistics by year of death registration allows for more timely production of mortality statistics than would be possible by year of occurrence.<sup>7</sup> However, as the purpose of this report is to provide local intelligence on suicide in East Sussex, the data has been analysed by year of death rather than year of death registration.

Local Public Health Intelligence teams can gain access to local mortality records through a data sharing agreement with the ONS. Access is granted to enable Public Health teams in local authorities to perform statistical reporting on local mortality data. Local Public Health Intelligence teams download their area's mortality records from the secure online Primary Care Mortality Database (PCMD), which holds records for all deaths of local residents, and of non-residents who died in the local area, that have been registered since the beginning of 2006. As the PCMD contains personal confidential data, access is carefully controlled. More information about the PCMD and restrictions on its use can be found in the Primary Care Mortality

Database factsheet, at [http://www.hscic.gov.uk/media/13819/PCMD-Factsheet-2014/pdf/PCMD\\_Factsheet\\_2014.pdf](http://www.hscic.gov.uk/media/13819/PCMD-Factsheet-2014/pdf/PCMD_Factsheet_2014.pdf)

Mortality records from the PCMD contain information about the cause(s) and place of death as well as demographic information. Their analysis can therefore provide useful information on local mortality issues such as suicide. Unlike the published statistical data they cover non-residents who died in the local area, as well as residents. In addition the information on the place of death is useful for understanding more about local suicide “hotspots”.

When ONS mortality data is analysed it is important to ensure that the identity of individuals is protected in any statistical reporting of the data. The ONS have issued guidance on disclosure control for mortality statistics; very broadly, this requires the suppression of any tabular (or similar) data with counts of two or less.<sup>8</sup>

## References

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<sup>1</sup> Suicides in the United Kingdom, 2013 Registrations. ONS Statistical Bulletin, published 19 February 2015

<sup>2</sup> Annual Report of the Chief Medical Officer 2013, Public Mental Health Priorities: Investing in the Evidence. Department of Health (2014)

<sup>3</sup> Suicide trends and geographical variations in the United Kingdom, 1991–2004. Anita Brock, Allan Baker, Clare Griffiths, Graham Jackson, Gillian Fegan and David Marshall. Health Statistics Quarterly, 31: 6-22 (2006)

<sup>4</sup> Men, Suicide and Society. Why disadvantaged men in mid-life die by suicide. Samaritans, 2012

<sup>5</sup> Suicide and mental illness: a clinical review of 15 years findings from the UK National Confidential Inquiry into Suicide. Kirsten Windfuhr and Navneet Kapur. British Medical Bulletin, 100: 101–121 (2011)

<sup>6</sup> Suicides in the United Kingdom, 2012 Registrations. ONS Statistical Bulletin, published 18 February 2014

<sup>7</sup> Mortality Statistics in England and Wales. ONS Information Paper, published 16 July 2014

<sup>8</sup> Disclosure control guidance for birth and death statistics. ONS Briefing note (revised Jan 2014) on the publication of tabular data