

Article

Recent trends in suicide: death occurrences in England and Wales between 2001 and 2018

Factors associated with recent changes in the rate of suicide in England and Wales, based on the date of death.

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Correction

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A correction has been made to the age group (45 to 49 years) in main point 9. This was due to a small manual processing error. You can see the original content in the superseded version. We apologise for any inconvenience.

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1 . Main points

- Since 2016, rates of suicide (based on when people died) in England and Wales have increased and with 10.6 suicides per 100,000 people, 2018 saw the highest rate in 14 years; this was a statistically significant increase from the rate in 2016 when there were 9.7 deaths per 100,000.
- Unlike other statistics on suicide [based on the date of death registration](#), this article uses deaths based on the date of death to understand the exact timing and some of the factors associated with recent changes in suicide rates in England and Wales.
- Between 2016 and 2018 in England, the male suicide rate increased statistically significantly by 8.2% (from 14.7 to 15.9 deaths per 100,000 males); the female rate increased by 6.4% (from 4.7 to 5.0 deaths per 100,000 females) but because of the relatively smaller number of deaths, this was not statistically significant.
- With 19.5 deaths per 100,000 in 2018, the suicide rate among males in Wales has not changed in recent years in terms of statistical significance; between 2016 and 2018, the suicide rate in females in Wales increased significantly by 72.5%, from 4.0 to 6.9 deaths per 100,000 females.
- In England there was some evidence of seasonal variation in rates of suicide between 2016 and 2018 with males seeing higher rates in April to June and females seeing higher rates in the first half of the year; such seasonal variation is a well-recognised feature of suicide in the UK.
- Change to the evidence threshold used by coroners - the standard of proof - to determine whether a death was suicide, is unlikely to explain why suicide rates started to rise in 2017.
- Age is an important factor for understanding recent rates of suicide; in England and Wales, and for at least a decade, people aged 10 to 24 years, and men aged 45 to 64 years have seen the greatest increases in suicide rates.
- The proportion of suicides caused by hanging, strangulation, and suffocation in England and Wales is the highest it has been in almost 20 years, accounting for 57.6% (3,148 deaths) of all suicides in 2018.
- Since 2001, people aged below 65 years have seen statistically significant increases in rates of hanging with the greatest increases seen among 45- to 49-year-olds (a 100.0% increase in the rate from this cause) and 50- to 54-year-olds (a 95.3% increase).
- Where people live is also important for understanding recent changes; between 2016 and 2018, statistically significant increases in rates of male suicide have been seen in cities and towns (up 12.7% in England and Wales), and areas in the median quintile of deprivation (up 18.7% in England only).

If you are a journalist covering a suicide-related issue, please consider following [Samaritans media guidelines on the reporting of suicide](#) because of the potentially damaging consequences of irresponsible reporting. In particular, the guidelines advise on terminology and include links to sources of support for anyone affected by the themes in the article, such as [Samaritans](#).

If you are struggling to cope, please call Samaritans for free on 116 123 (UK and ROI), email jo@samaritans.org or visit [the Samaritans website](#) to find details of the nearest branch. Samaritans is available round the clock, every single day of the year, providing a safe place for anyone struggling to cope, whoever they are, however they feel, whatever life has done to them.

2 . Overview of suicide trends

In England and Wales, all deaths classified as suicide are certified by a coroner. As such, whenever coronial-related change occurs, like the recent change in the standard of proof, this can have an impact on suicide rates. However, changes in suicide rates are rarely caused by one factor alone, and [previously published analysis concluded that the change in the standard of proof cannot explain why suicide rates recently began to increase.](#)

National Statistics on suicide are based on when deaths are registered; this article is based on when people died to better understand the timeline of recent changes in suicide rates.

Using death registrations based on the date of death, this article aims to understand when the recent rise in suicide rates began, and a range of factors that may be associated with the recent changes in rates.

This article does not cover suicides that occurred during the coronavirus (COVID-19) pandemic. Because of delays with registering deaths caused by suicide, we will be unable to report suicides during the pandemic until part way through 2021.

The findings in this article use the latest annual death registrations at the time of analysis – all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide – around five to six months on average – the analysis will capture most suicides that occurred to the end of the study period (2018). It is possible that the estimates could change, upwards, particularly for 2017 and 2018, when subsequent death registrations are analysed.

3 . Country-specific deaths between 2001 and 2018

England and Wales

[Previously published statistics](#) based on the date of death registration showed suicide rates increased in 2018 following several years of decline. However, when looking at data based on the date of death, the rise began earlier (see Figure 1).

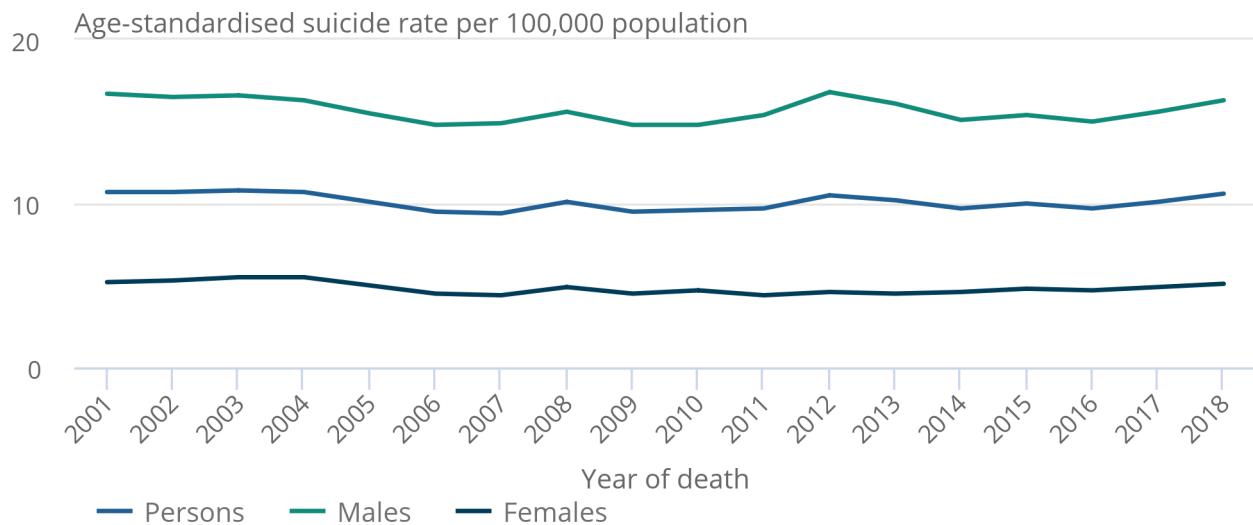
The overall age-standardised suicide rate in England and Wales has subtly increased year-on-year since 2016. With 10.6 deaths per 100,000 people, the rate in 2018 was statistically significantly higher than that in 2016 when there were 9.7 deaths per 100,000. The overall suicide rate in 2018 is the highest it has been since 2004 but remains similar to the rate almost 20 years ago in 2001 (10.7 deaths per 100,000).

Figure 1: The rate of suicide in England and Wales has increased since 2016

Age-standardised suicide rates in England and Wales (2001 – 2018) by sex, by date of death

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Age-standardised suicide rates in England and Wales (2001 – 2018) by sex, by date of death



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

Between 2016 and 2018, suicide rates in England and Wales increased for both sexes. Among males, the rate increased by 8.7% from 15.0 to 16.3 deaths per 100,000 males, a statistically significant increase. Among females, the rate increased by 8.5% from 4.7 to 5.1 deaths per 100,000 females; however, because of the smaller number of deaths creating more statistical uncertainty, this increase was not found to be statistically significant.

The male rate in 2018 did not exceed the previous peak observed in 2012 when there were 16.8 deaths per 100,000 males. However, the 2018 female rate is the highest it has been since 2004.

Registration delays

Coroner inquests naturally take time to reach conclusions, therefore deaths caused by suicide are registered several months after they occurred. This results in a delay between the date of death and the date of death registration, referred to as a registration delay. For several years, registration delays in England and Wales have been increasing. For example, the median delay in England was 102 days in 2001; in 2018 this was 159 days, an increase of 55.9%.

Increasing registrations delays have made it difficult to see the exact timing of the recent increase in suicide in our annual suicide statistics based on the date of death registration.

England

The overall pattern in England is the same as England and Wales (combined). The suicide rate in England statistically significantly increased from 9.6 per 100,000 people in 2016 to 10.3 per 100,000 in 2018 (see Figure 2).

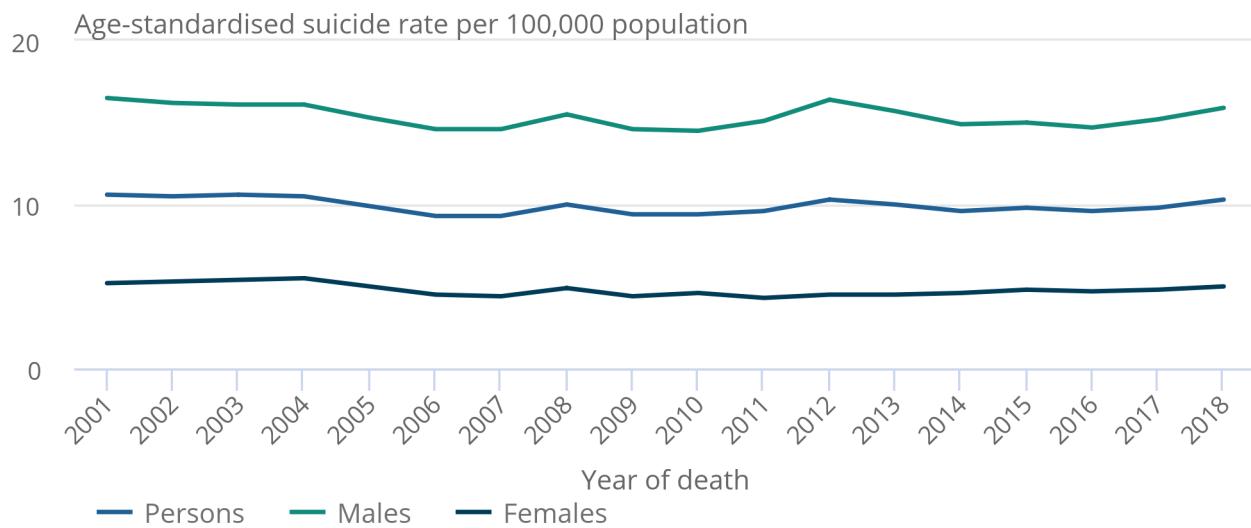
By sex, the rate statistically significantly increased by 8.2% in males, from 14.7 to 15.9 deaths per 100,000 males, during the same period. Among females, the rate increased by 6.4% from 4.7 to 5.0 deaths per 100,000 females, however, this was not statistically significant.

Figure 2: The suicide rate among men in England increased statistically significantly between 2016 and 2018

Age-standardised suicide rates in England (2001 – 2018) by sex, by date of death

Figure 2: The suicide rate among men in England increased statistically significantly between 2016 and 2018

Age-standardised suicide rates in England (2001 – 2018) by sex, by date of death



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

Wales

Changes in suicide rates over time in Wales are more volatile than those in England (see Figure 3) because of the relatively smaller numbers of deaths. For example, in 2018, 6.5% of suicides in England and Wales, or 354 out of 5,465 deaths, were in Wales.

Among females in Wales, with 6.9 deaths per 100,000 females, the suicide rate in 2018 is the highest it has been since 2001 and is statistically significantly higher than the rate in 2016 when there were 4.0 deaths per 100,000 (a 72.5% increase in the rate since 2016).

Since 2001, the suicide rate among males in Wales has seen very few statistically significant changes. In 2003, the rate peaked at 23.0 deaths per 100,000 males, and then fell by 30.4% to its lowest point in 2008 at 16.0 deaths per 100,000, a statistically significant change.

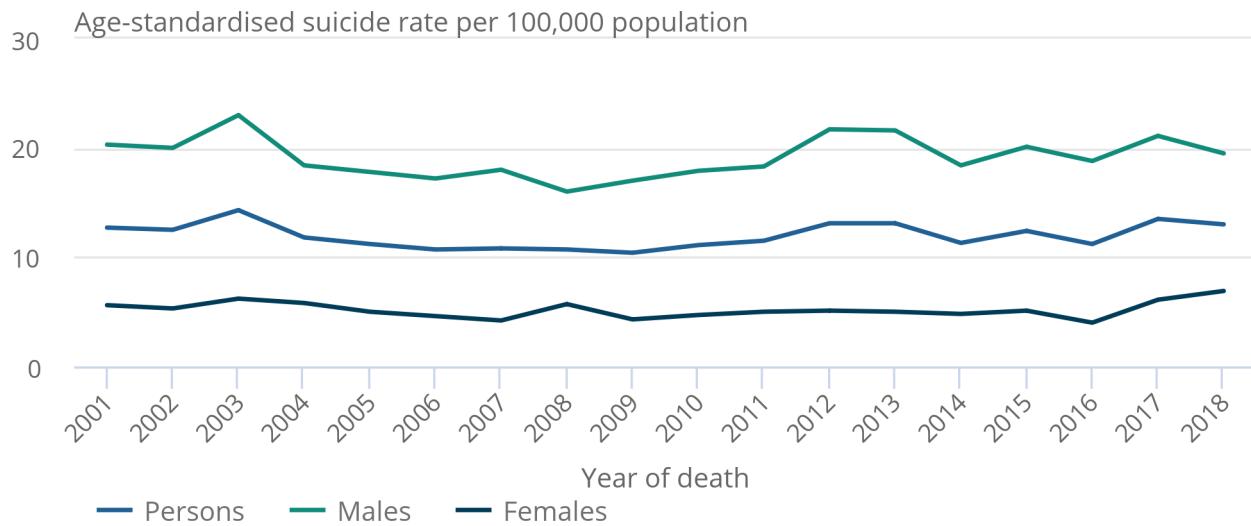
Since 2008, the suicide rate among males in Wales has gone up, though not statistically significantly, and in recent years there has been no change in the rate in terms of statistical significance. In 2018, the suicide rate among males in Wales was 19.5 deaths per 100,000 males.

Figure 3: In Wales, suicide rates among females increased statistically significantly between 2016 and 2018

Age-standardised suicide rates in Wales (2001 – 2018) by sex, by date of death

Figure 3: In Wales, suicide rates among females increased statistically significantly between 2016 and 2018

Age-standardised suicide rates in Wales (2001 – 2018) by sex, by date of death



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for Wales exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

4 . Rates by quarter of death

To understand more clearly when the recent increase in suicide began, here we look at age-standardised suicide rates by specific quarter of death for 2014 to 2018.

England

As described in Section 3, suicide in England started to increase after 2016. However, when looking at rates of suicide by quarter of death (see Figure 4), these have not been consistently high in every quarter since 2016. For males in England, the highest rates have been observed in the second quarter (April to June) of both 2017 and 2018. Other recent years (2014 and 2015) have also seen the highest male suicide rates in the second quarter.

Between 2017 and 2018, suicide rates among females have been higher in the first half of each year.

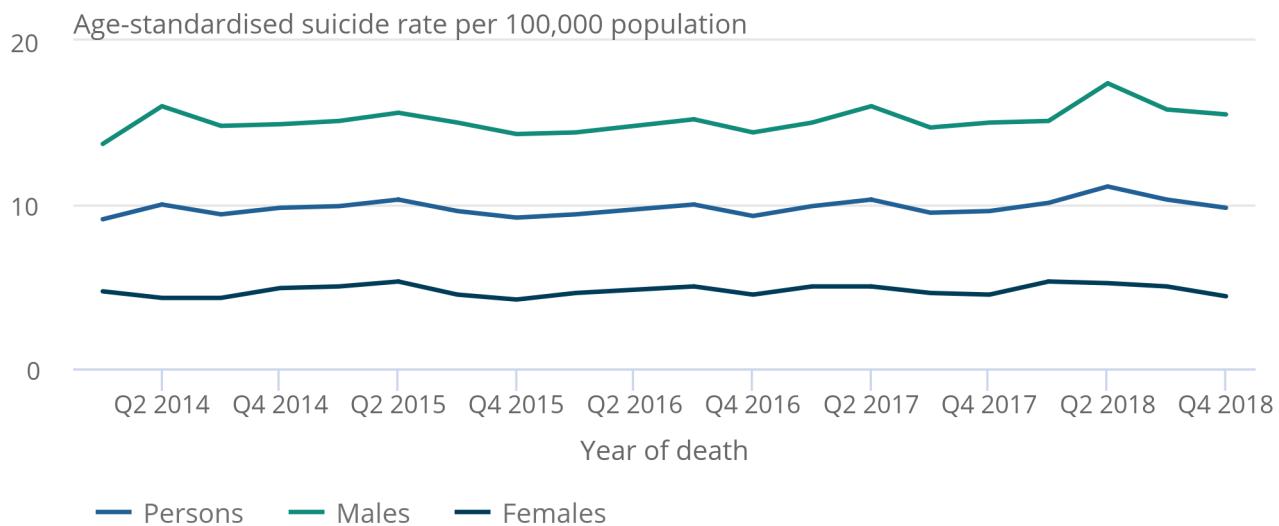
Seasonal differences in suicide rates, such as a peak during spring, is a [well-recognised feature of suicide in the UK and internationally](#). Possible explanations include seasonal changes in social and economic risk factors as well as the biological impact of changes in season such as day length and temperature.

Figure 4: Since 2016 in England males have seen higher suicide rates in Spring and early Summer, whereas females have seen higher rates in the first half of the year

Age-standardised suicide rates in England (2014 – 2018) by sex and quarter

Figure 4: Since 2016 in England males have seen higher suicide rates in Spring and early Summer, whereas females have seen higher rates in the first half of the year

Age-standardised suicide rates in England (2014 – 2018) by sex and quarter



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

Wales

Because of smaller numbers of deaths, quarterly suicide rates for Wales are volatile, and so here we look at rates for all people.

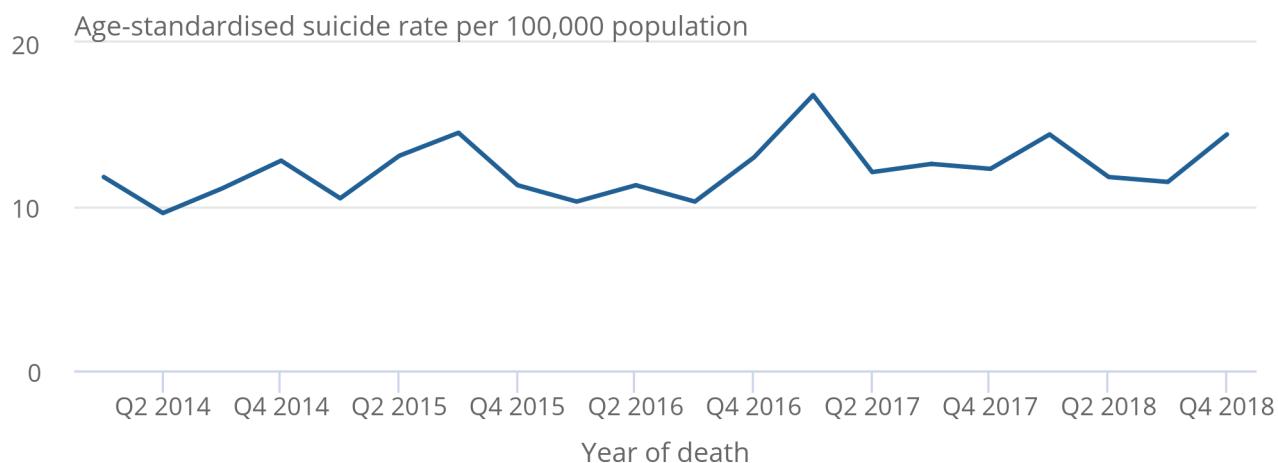
When looking at quarterly data since 2014, suicide rates in Wales have seen very few statistically significant changes. Despite this, a statistically significant increase in the Wales quarterly suicide rate was seen between Quarter 3 (July to Sept) 2016, when the rate was 10.3 suicides per 100,000 people, and Quarter 1 (Jan to Mar) 2017 when the rate was 16.8 deaths per 100,000.

Figure 5: In Wales, quarterly rates of suicide are volatile and have not changed much, in terms of statistical significance, since 2014

Age-standardised suicide rates in Wales (2014 – 2018) by quarter, persons

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Age-standardised suicide rates in Wales (2014 – 2018) by quarter, persons



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for Wales exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

To summarise, the rate of suicide in England and Wales has statistically significantly increased between 2016 and 2018 and the rate in 2018 is the highest it has been since 2004. Looking at England and Wales separately, between 2016 and 2018, the male suicide rate in England statistically significantly increased by 8.2%, and among females the increase was 6.4%, though the latter was not statistically significant.

In Wales, the suicide rate among females increased statistically significantly by 72.5% during the same period, however, among males in Wales rates have not changed, in terms of statistical significance, in recent years. In England there is some evidence of seasonal differences in suicide rates since 2016. Among males, suicide rates have been higher in the spring and early summer (April to June), and among females, rates have been higher in the first half of the year.

5 . Coronial-related change in England and Wales

As described in [Change in the Standard of Proof used by Coroners](#) and its impact on suicide death registrations data in England and Wales, it is not possible to say that the lowering of the evidence threshold – the standard of proof – used by coroners to conclude suicide as a cause of death explains why suicide rates in England and Wales recently began to rise.

Suicide data based on the date of death also confirm that the change in the standard of proof cannot be the only explanation of the recent rises in suicide rates.

As a result of death registration delays, around half of the suicides that occurred in 2017, when the suicide rate started to increase, were registered in 2018, the year of the change in the standard of proof. Only a small proportion (9.7% or 504 out of 5,173 deaths) of the suicides that occurred in 2017, were registered from the date of the new standard of proof. That is, the change in the standard of proof is unlikely to explain why suicide rates started to increase.

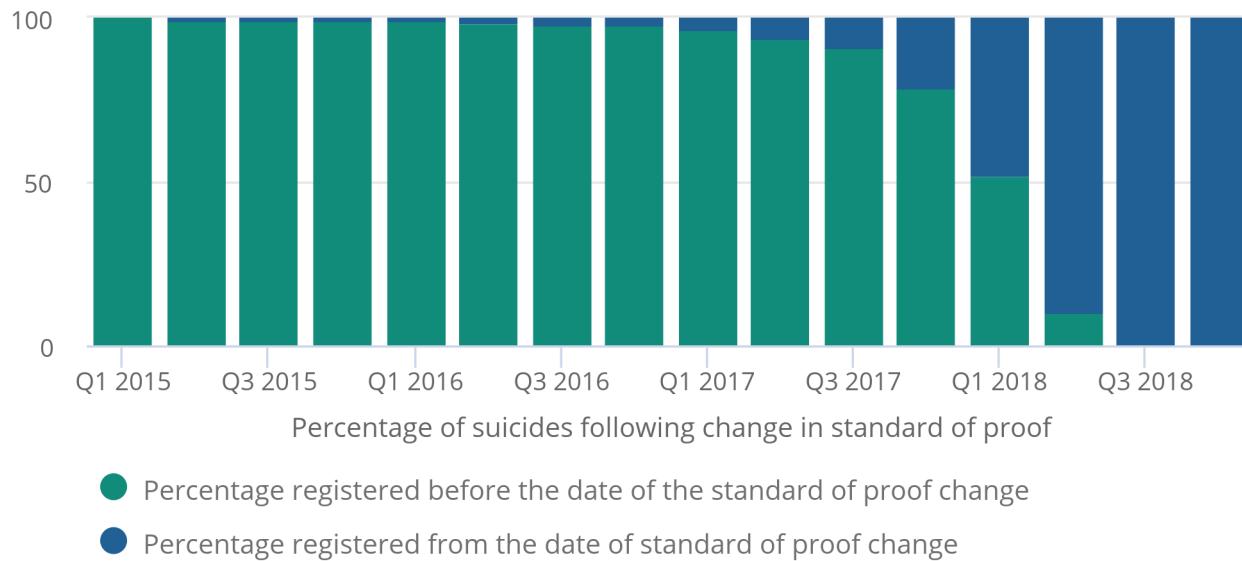
For suicides that occurred in 2018, a larger proportion (84.6% or 4,626 out of 5,465 deaths) were registered from the date of the new standard of proof. It is possible that the legal change could be affecting suicide rates for 2018, but other published data show that change among coroners has been a gradual trend over time since the lower standard of proof became law.

Figure 6: A small proportion of suicides before 2018 were registered from the date of the change in the standard of proof

For suicides that occurred 2015 to 2018 by quarter in England and Wales, the proportion (%) that were registered from the date of the standard of proof change (26 July 2018)

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For suicides that occurred 2015 to 2018 by quarter in England and Wales, the proportion (%) that were registered from the date of the standard of proof change (26 July 2018)



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. The lower standard of proof used by coroners came into effect on 26 July 2018.
3. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

6 . Suicide patterns by age

In recent years, rates of suicide in England and Wales have generally increased in people of most ages. However, increases have been most pronounced among young people - those aged 10 to 24 years, and men aged 45 to 64 years.

Over the past decade, the rate among young men has increased by 27.9% from 6.1 deaths per 100,000 males to 7.8 deaths per 100,000. In young women, the upward trend began a little later, in 2011, when the rate was 1.7 deaths per 100,000 females; in 2018 the rate had increased by 70.6% to 2.9 deaths per 100,000. The increases seen in young people have been statistically significant.

[Recent academic research](#) shows that some of the most populous high-income countries in the world, including Australia, Canada, the UK, and the US, are experiencing a rise in youth suicide rates, with income inequality forming one of the main associations with suicide rate rises.

The change in rates of suicide among young people is mirrored by increasing rates of hospital admissions as a result of self-harm in those of the same age (10 to 24 years). This is particularly the case among young females.

In England, for example, [the rate of hospital admissions as a result of self-harm](#) has statistically significantly increased by 35.8% between 2012 to 2013 and 2018 to 2019 (from 508.2 to 690.2 admissions per 100,000 people). For young males in England, hospital admissions as a result of self-harm have also statistically significantly increased during the same period by 6.8% (from 196.8 admissions per 100,000 in 2012 to 2013, to 210.2 admissions per 100,000 in 2018 to 2019).

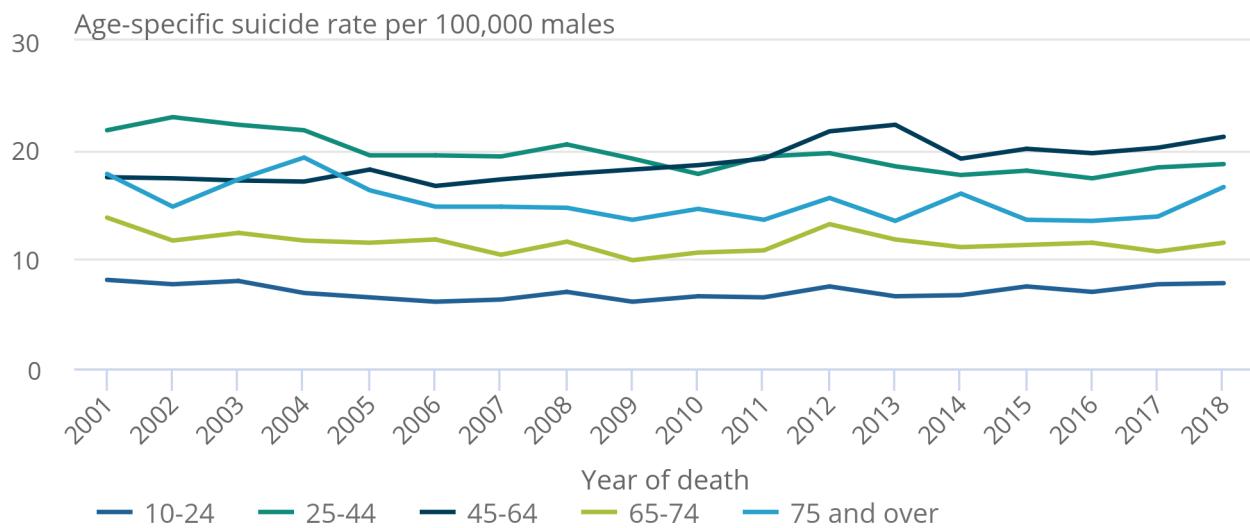
For men aged 45 to 64 years, the rate of suicide has been on an upward trajectory since 2006 when the rate was 16.7 deaths per 100,000 males. The rate then peaked at 22.3 deaths per 100,000 males in 2013; a subsequent reduction in the rate was then followed by further rises to 21.2 deaths per 100,000 in 2018.

Figure 7: Men aged 10 to 24 years and 45 to 64 years have seen some of the greatest increases in suicide rates

Age-specific suicide rates by broad age group, males, deaths that occurred in England and Wales 2001 to 2018

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Age-specific suicide rates by broad age group, males, deaths that occurred in England and Wales 2001 to 2018



Source: Office for National Statistics

Notes:

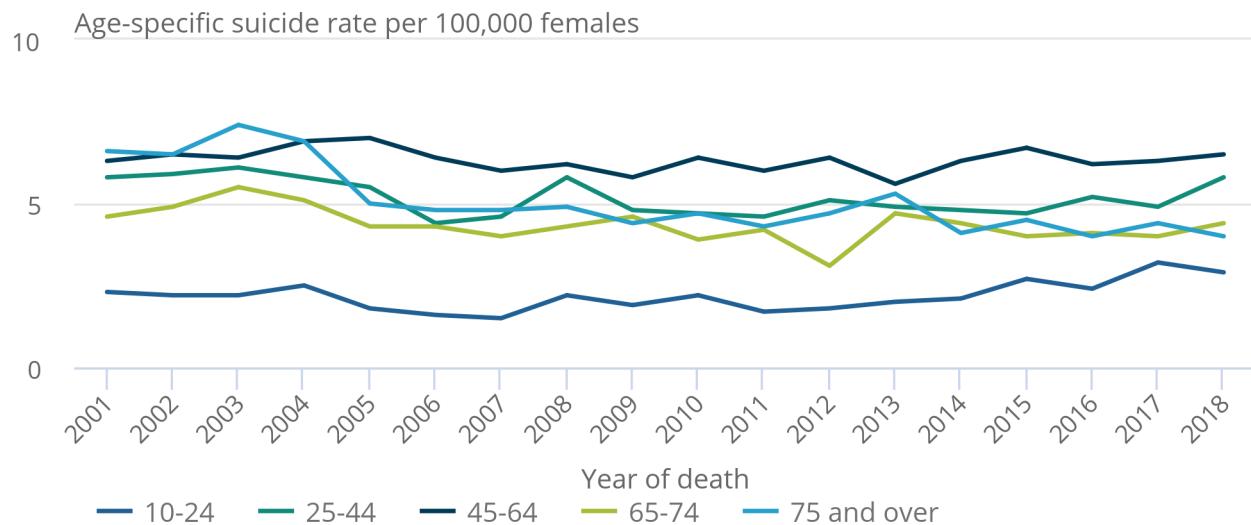
1. Figures are for males aged 10 years and over.
2. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
3. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

Figure 8: Suicide rates in young women have been on an upward trend since 2011

Age-specific suicide rates by broad age group, females, deaths that occurred in England and Wales 2001 to 2018

Figure 8: Suicide rates in young women have been on an upward trend since 2011

Age-specific suicide rates by broad age group, females, deaths that occurred in England and Wales 2001 to 2018



Source: Office for National Statistics

Notes:

1. Figures are for females aged 10 years and over.
2. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
3. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

7 . Suicide methods

Hanging, strangulation, and suffocation (all grouped together) continued to be the most common method of suicide in England and Wales in 2018 (see Figure 9). In 2018, this method accounted for 57.6% of all suicides overall (3,148 deaths). This is the highest proportion of deaths attributable to this method in almost two decades, since 2001.

Figure 9: Hanging is the most common method of suicide for both males and females and has reached its highest level in almost two decades

The proportion of suicides in England and Wales (2001 – 2018) attributable to each method by sex.

Notes

1. Figures are for persons aged 10 years and over.
2. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
3. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

[Download the data](#)

Violent methods of suicide, including hanging, are more likely to result in death - an important factor when trying to understand recent changes in suicide rates.

Between 2001 and 2018, the proportion of male suicides attributable to hanging, strangulation, and suffocation increased from 43.8% to 60.9% of all suicides. This increase is reflected by a statistically significant increase in the rate of death, from 7.2 (1,617 deaths) to 9.8 deaths (2,511 deaths), caused by this method of suicide per 100,000 males during the same period.

For females, the proportion of suicides attributable to this method during the same period also increased significantly from 26.8% of all suicides (329 deaths, 1.4 deaths per 100,000 females) to 47.5% (637 deaths, 2.4 deaths per 100,000).

The increase in hanging, strangulation, and suffocation is mirrored by a decrease in the number of suicides caused by poisoning. Among males, the proportion of suicides caused by poisoning fell from 29.7% of all suicides in 2001 (1,094 deaths, 4.9 deaths per 100,000 males) to 17.0% in 2018 (702 deaths, 2.8 deaths per 100,000 males).

During the same time period, females had the greatest reduction in the proportion of suicides caused by poisoning from 48.2% of all suicides (591 deaths, 2.5 deaths per 100,000 females) to 33.0% (443 deaths, 1.7 deaths per 100,000 females). The reduction in poisoning is also reflected by statistically significantly lower rates of deaths caused by this method of suicide for both sexes during the same period.

Academic studies suggest the increase in hanging may be related to restrictions on the availability of other methods, such as drugs used in overdose, and to a misconception that hanging is a quick and painless way to die (for more information see [Factors influencing the decision to use hanging as a method of suicide](#)).

Growing numbers of suicides in young people are caused by hanging

Since 2001, people below the age of 65 years have seen statistically significant increases in the rate of hanging, strangulation and suffocation. Among young people aged 10 to 24 years, 45.9% of all suicides were caused by hanging in 2001 (2.4 deaths per 100,000 people) increasing to 69.9% in 2018 (3.8 deaths per 100,000).

For those aged 25 to 44 years, 42.9% of all suicides were caused by hanging in 2001 (5.9 deaths per 100,000) increasing to 64.1% in 2018 (7.9 deaths per 100,000). During the same period, the proportion of suicides caused by hanging among 45- to 64-year-olds increased from 36.0% (4.3 deaths per 100,000) to 54.4% (7.5 deaths per 100,000). While those aged over 65 years have also seen increases in hanging, rates in 2001 and 2018 are statistically similar.

Some of these ages have also seen the most pronounced increases in suicide rates in recent years ([see Section 6](#)).

Figure 10: Deaths with the highest age specific rates (10 to 24-year-olds and 45 to 64-year-olds) have seen the greatest increases in hanging

The proportion of suicides in England and Wales (2001 – 2018) attributable to each method by broad age group, persons

Notes

1. Figures are for persons aged 10 years and over.
2. Figures for England and Wales (combined) include deaths of non-residents.
3. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

[Download the data](#)

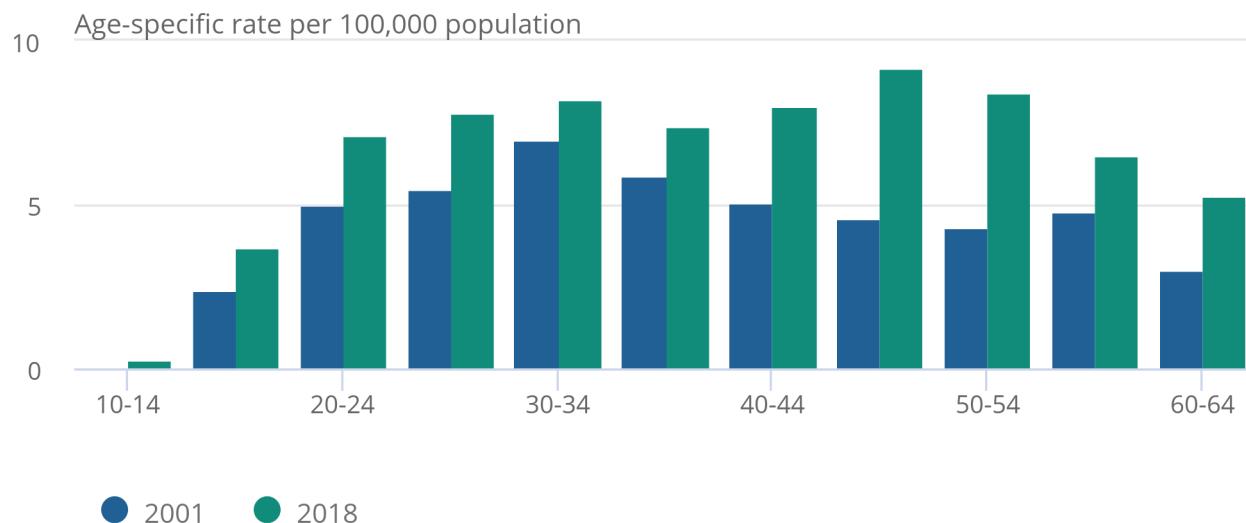
When looking at those aged below 65 years in more detail (see Figure 11), age-specific rates of hanging, strangulation and suffocation have increased the most in 45- to 49-year-olds between 2001, when the rate was 4.6 deaths per 100,000 people), and 2018, when the rate was 9.2 deaths per 100,000, an increase of 100%. The next age group with the greatest increase during the same period was 50- to 54-year-olds (4.3 to 8.4 deaths per 100,000, an increase of 95.3%), followed by 60- to 64-year-olds (3.0 to 5.3 deaths per 100,000, an increase of 76.7%).

Figure 11: Middle aged people (45 to 54 years) and 60 to 64-year-olds have seen the largest increases in hanging

Age-specific rates of hanging, suffocation, and strangulation, for those aged 64 years and below, deaths that occurred in England and Wales in 2001 and 2018

Figure 11: Middle aged people (45 to 54 years) and 60 to 64-year-olds have seen the largest increases in hanging

Age-specific rates of hanging, suffocation, and strangulation, for those aged 64 years and below, deaths that occurred in England and Wales in 2001 and 2018



Source: Office for National Statistics

Notes:

1. Figures are for persons aged 10 years and over.
2. Figures for England and Wales (combined) include deaths of non-residents.
3. Underlying cause of death defined using the International Classification of Diseases (10th Revision, ICD-10): Intentional self-harm by hanging, strangulation and suffocation (ICD-10 code X70) or hanging, strangulation and suffocation, undetermined intent (ICD-10 code Y20).
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.
5. Age-specific rates for 10 to 14 year olds in both 2001 and 2018 are unreliable due to the relatively smaller number of deaths for this age group.

8 . Suicide patterns by where people live

Urban and rural areas

In England and Wales, [geographies can be classified into urban or rural areas](#) based on the size of the population at the time of the 2011 Census. Urban areas, including conurbations and cities, have a population size of 10,000 people or more. Geographies with smaller populations, including small towns, villages, and hamlets, are classified as rural areas.

When looking at male suicide, a statistically significant increase in the rate has only been seen in cities and towns from 15.8 deaths per 100,000 males in 2016 to 17.8 deaths per 100,000 in 2018, an increase of 12.7% (see Figure 12). Of the different kinds of rural and urban areas, cities and towns accounted for the most suicides during the period, 48.1% (or 5,616 out of the 11,669 male suicides between 2016 and 2018).

The rate of male suicide in rural towns and fringes also went up between 2016 and 2018, from 14.0 to 17.3 deaths per 100,000 males (a 23.6% increase). However, because of a relatively smaller number of deaths occurring in these areas (9.0% or 1,055 out of the 11,669 male suicides between 2016 and 2018), the rate change was not statistically significant.

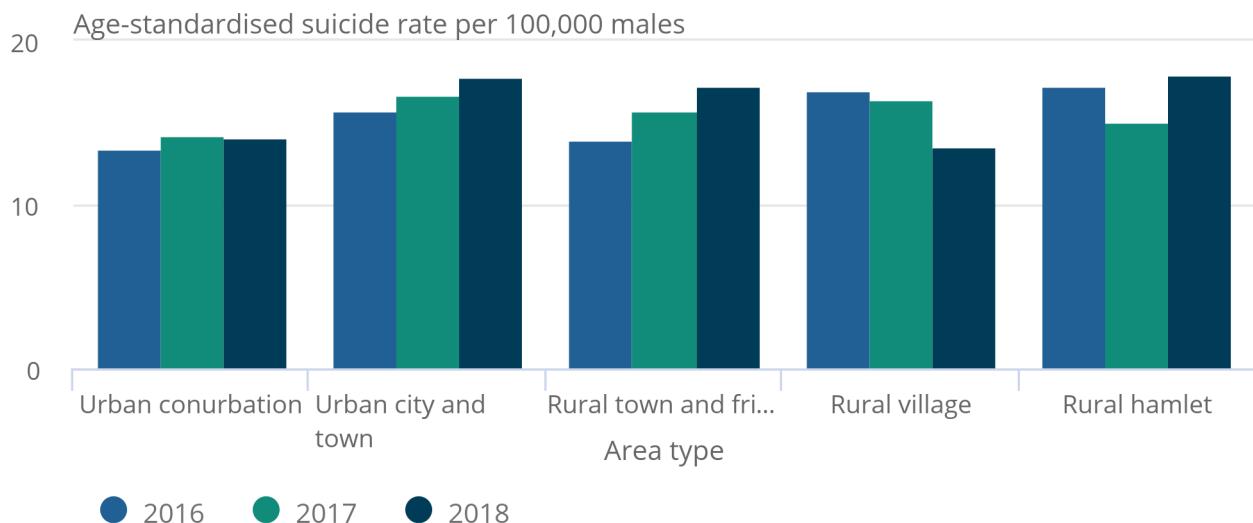
Rates in other kinds of urban and rural areas have been more consistent in recent years, except for rural villages where the rate has decreased.

Figure 12: Among men, the suicide rate in urban cities and towns increased by 12.7% between 2016 and 2018

Age-standardised suicide rates, males, deaths in England and Wales by urban and rural area, 2016 to 2018

Figure 12: Among men, the suicide rate in urban cities and towns increased by 12.7% between 2016 and 2018

Age-standardised suicide rates, males, deaths in England and Wales by urban and rural area, 2016 to 2018



Source: Office for National Statistics

Notes:

1. Figures are for males aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
4. Based on the [2011 classification of urban and rural areas](#).
5. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

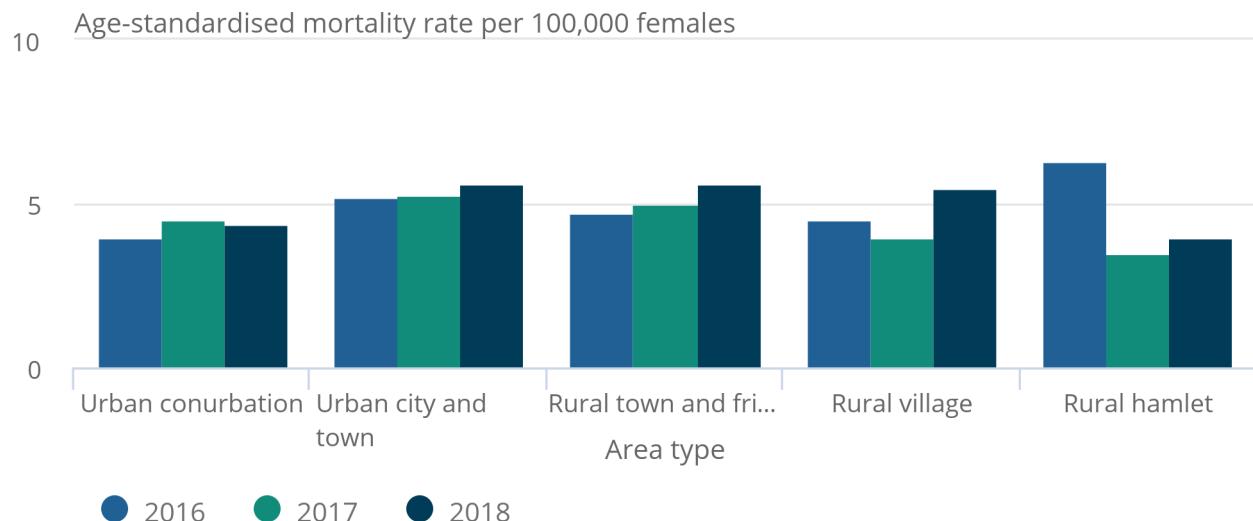
Among females, because of the relatively smaller numbers of deaths, rates did not statistically significantly increase or decrease in any of the urban rural area types in recent years (see Figure 13). Despite this, the overall pattern was similar to males with increasing suicide rates in cities and towns as well as rural towns and fringes.

Figure 13: For females, suicide rates have been stable across all urban and rural areas in recent years

Age-standardised suicide rates, females, deaths in England and Wales by urban and rural area, 2016 to 2018

Figure 13: For females, suicide rates have been stable across all urban and rural areas in recent years

Age-standardised suicide rates, females, deaths in England and Wales by urban and rural area, 2016 to 2018



Notes:

1. Figures are for females aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England and Wales (combined) include deaths of non-residents, and are based on the latest postcode boundaries.
4. Based on the [2011 classification of urban and rural areas](#).
5. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

Local area deprivation

The Index of Multiple Deprivation (IMD) is an overall measure of deprivation based on factors such as income, employment, health, education, crime, the living environment and access to housing within an area. There are different measurements for [England](#) and [Wales](#), which are not directly comparable.

When looking at deaths for England and Wales separately, rates of suicide are markedly higher in the most than the least deprived local areas (see Figures 14 to 16). For example, among males in England, the suicide rate in the most deprived areas in 2018 (quintile 1; 20.3 deaths per 100,000 males) was 72.0% larger, and statistically significantly higher, than the rate in the least deprived areas (quintile 5; 11.8 deaths per 100,000).

Looking at recent changes in England (Figures 14 and 15), there was no clear evidence of a differential patterning of the recent rise in suicide rates in areas with high (quintile 1) or low (quintile 5) deprivation.

Among males in England, there was a statistically significant increase in the rate of suicide in the median quintile of area deprivation (quintile 3), where the rate increased by 18.7% from 13.9 deaths per 100,000 males in 2016 to 16.5 deaths per 100,000 in 2018.

Figure 14: Males who lived in median levels of deprivation saw an increase of 18.7% in the rate of suicide between 2016 and 2018

Age-standardised suicide rates, males, deaths in England by deprivation quintiles, 2016 to 2018

Notes

1. Figures are for males aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.
5. Deprivation quintiles are based on the English Index of Multiple Deprivation (version 2019), the official measure of relative local area deprivation with quintile 1 representing the most deprived areas and quintile 5 representing the least deprived.

[Download the data](#)

Figure 15. Suicide rates in females have been stable across all area types in recent years

Age-standardised suicide rates, females, deaths in England by deprivation quintiles, 2016 to 2018

Notes

1. Figures are for females aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.
5. Deprivation quintiles are based on the English Index of Multiple Deprivation (version 2019), the official measure of relative local area deprivation with quintile 1 representing the most deprived areas and quintile 5 representing the least deprived.

[Download the data](#)

Wales

Because of smaller numbers of deaths, suicide data for Wales by index of multiple deprivation are volatile, and so we look at rates for all people.

In Wales, figures suggest that those who lived in the least deprived local areas (quintile 5) have seen the greatest increase in suicide rates between 2016 and 2018; however, because of the small number of deaths creating more statistical uncertainty, this change was not statistically significant.

Between 2016 and 2017 in Wales, a statistically significant change in the suicide rate has only been seen in the second quintile of area deprivation – local areas that are not the most deprived but still have higher than average levels of deprivation – where the rate increased from 9.7 deaths per 100,000 people in 2016 to 17.6 deaths per 100,000 in 2017.

Figure 16: In 2017, the second quintile of deprivation had the highest suicide rate in Wales

Age-standardised suicide rates, persons, deaths in Wales by deprivation quintiles, 2016 to 2018.

Notes

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for Wales exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.
5. Deprivation quintiles are based on the Welsh Index of Multiple Deprivation (version 2019), the official measure of relative local area deprivation with quintile 1 representing the most deprived areas and quintile 5 representing the least deprived.

[Download the data](#)

Regions of England

Suicide rates in each region of England have generally remained relatively consistent in recent years (see Figure 17). In 2018, the North East had the highest rate with 12.4 deaths per 100,000 people.

When considering deaths back to 2014, rates in all regions except for the North West in 2018 were at historical highs (see Table 15 of [the accompanying dataset](#)). Meanwhile, the rate for London (7.7 deaths per 100,000) was at a historical low in 2018.

Figure 17: 2018 saw historically high suicide rates in several English regions

Age-standardised suicide rate in England (2014 to 2018) by English region, by date of occurrence.

Notes

1. Figures are for persons aged 10 years and over.
2. Age-standardised suicide rates per 100,000 population, standardised to the 2013 European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.
3. Figures for England exclude deaths of non-residents, and are based on the latest postcode boundaries.
4. Figures are based on the date people died and are for all deaths registered to the end of 2019. Because of the length of time it takes coroners to certify deaths caused by suicide, around five to six months on average, the analysis will capture most suicides that occurred to the end of the study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

[Download the data](#)

9 . Other factors that may be associated with recent changes in suicide rates

The reasons for a change in the national rate of suicide is complex and will rarely be due to one factor alone. In this article we investigated changes in suicide rates by sex, age, method of suicide, and indicators of deprivation, and we found no consistent explanation for the observed trends.

It is important to note that we cannot show all the possible contributing factors with the data we hold. Due to the complexity of suicide, many other factors not covered here will be associated with recent changes in suicide rates.

[Among young people for example](#), adverse childhood experiences, academic pressures, bereavement, self-harm, and exposure to harmful online content, will all be important. [For those of working age](#), factors such as low pay and low job security have also been shown to correlate strongly with suicide. [For older people](#), psychiatric illness, deterioration of physical health and functioning, and social factors have been identified as important.

10 . Suicide data

[Recent trends in suicide: death occurrences in England and Wales between 2001 and 2018](#)

Dataset | Released 8 December 2020

Number of suicides and suicide rates by sex, broad age groups, method, region, inequalities and quarter of death in England and Wales, occurring between 2001 and 2018.

11 . Glossary

Suicide

This release is based on the National Statistics definition of suicide; this includes all deaths from intentional self-harm for persons aged 10 years and over, and deaths caused by injury or poisoning where the intent was undetermined for those aged 15 years and over. Further information on the definition can be found in the [Suicide rates in the UK QMI](#).

Standard of proof

The level of evidence needed by coroners when determining whether a death was caused by suicide, which was changed from the criminal standard - beyond all reasonable doubt - to the civil standard - on the balance of probabilities on 26 July 2018. [For more information see Change in the standard of proof used by Coroners and its impact on suicide death registrations data in England and Wales](#).

Registration delay

Figures are based on deaths registered in each calendar year, rather than the date on which the death occurs. The difference between these dates is known as the registration delay.

Age-standardised mortality rate

Age-standardised mortality rate in this bulletin refers to a weighted average of the age-specific mortality rates per 100,000 people and standardised to the 2013 European Standard Population. Age-standardised mortality rates allow for differences in the age structure of populations and therefore allow valid comparisons to be made between geographic areas, the sexes and over time.

Statistical significance

The term "significant" refers to statistically significant changes or differences based on unrounded figures. Significance has been determined using the 95% [confidence intervals](#), where instances of non-overlapping confidence intervals between figures indicate the difference is unlikely to have arisen from random fluctuation.

12 . Data sources and quality

Statistics on mortality are derived from the information provided when deaths are certified and registered. These statistics are assessed fully compliant with the [Code of Practice for Statistics](#) and are therefore designated as National Statistics.

More quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in the [Mortality statistics in England and Wales QMI](#), the [Suicide rates in the UK QMI](#) and the [User guide to mortality statistics](#).

Populations

Mortality rates are calculated using the number of deaths and [mid-year population estimates](#) and population projections provided by the Office for National Statistics (ONS) Population Estimates Unit. Population estimates are based on the decennial England and Wales census estimates and use information on births, deaths and migration to estimate the mid-year population in non-census years.

Collaborations and acknowledgment

David Gunnell, Louis Appleby, Keith Hawton, Navneet Kapur, and Ann John.

13 . Strengths and limitations

Strengths

A robust method is used for the analysis: age-standardised rates allow for differences in age structure of populations and therefore allow valid comparisons to be made between the sexes and different occupations.

We only refer to groupings that have at least 20 deaths. For these, reliable age-standardised rates can be calculated, reducing the likelihood of the findings being a result of chance. In our accompanying datasets, rates have been marked as unreliable where there are fewer than 20 deaths, and we have not produced age-specific rates for age groups with fewer than three deaths.

Suicide deaths are compiled using information supplied when a death is registered, which gives complete population coverage.

The release uses the National Statistics definition of suicide, which is consistently used by government departments, agencies and the devolved administrations across the UK.

Quality assurance procedures have been undertaken throughout all stages of the analysis to minimise the risk of error.

Limitations

In England and Wales, when someone dies unexpectedly, a Coroner investigates the circumstances to establish the cause of death. The investigation, referred to as an "inquest", is a process that can take months and in some cases years. The length of time it takes to hold an inquest creates a gap between the date of death and the date of death registration, referred to as a registration delay.

For deaths caused by suicide, this generally means that around half of the deaths registered each year will have occurred in the previous year or earlier. The analysis will capture most suicides that occurred to the end of study period – 2018 – however, it is possible that the estimates could change, upwards, when subsequent death registrations are analysed.

14 . Related links

[Suicide occurrences, England and Wales](#)

Dataset | 1 September 2020

Number of suicides and suicide rates, by sex and age, for England and Wales occurring from 1981 to 2018.

[Suicides in England and Wales: 2019 registrations](#)

Bulletin | 1 September 2020

Registered deaths in England and Wales from suicide analysed by sex, age, area of usual residence of the deceased and suicide method.

[Deaths caused by suicide by quarter in England](#)

Dataset | 1 September 2020

Provisional rate and number of suicide deaths registered in England per quarter. Includes 2001 to 2019 registrations and provisional data for Quarter 1 (Jan to Mar) and Quarter 2 (Apr to June) 2020.

[Change in the standard of proof used by coroners and its impact on suicide death registrations data in England and Wales](#)

Article | 8 December 2020 Looking at the impact of the change in the standard of proof - the evidence threshold used by coroners - on suicide registrations statistics, England and Wales

[Quarterly suicide death registrations in England: 2001 to 2019 registrations and Quarter 3 \(July to Sept\) 2020 provisional data](#)

Bulletin | 8 December 2020

Provisional rate and number of suicide deaths registered in England per quarter. Includes 2001 to 2019 registrations and provisional data for Quarter 3 (July to Sept) 2020.