The University of Manchester

National Confidential Inquiry

into Suicide and Safety in Mental Health

ANNUAL REPORT: ENGLAND, NORTHERN IRELAND, SCOTLAND AND WALES

2019

HQIP
Healthcare Quality Improvement Partnership

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EXECUTIVE SUMMARY

INTRODUCTION

The 2019 annual report from the National Confidential Inquiry into Suicide and Safety in Mental Health (NCISH) provides findings relating to people who died by suicide in 2007-2017 across all UK countries. Additional findings are presented on the number of people convicted of homicide, and those under mental health care.

The NCISH database includes a national case series of suicide by mental health patients over 20 years. The current suicide database stands at over 136,000 suicides in the general population, including over 35,000 patients. This internationally unique database allows NCISH to make recommendations for clinical practice and policy that will improve safety locally, nationally and internationally. As with our previous annual reports, the main findings are presented by country for the baseline year of 2007 and the subsequent 10 years, including the most recent year (2017) for which comprehensive data are available. A UK-wide section provides selected findings for the UK as a whole.

METHODOLOGY AND ANALYSIS

The NCISH method of data collection is provided in our previous annual reports and on our website. The main findings of the report are presented in a combination of figures, tables and maps. These show changes in key figures in patient safety over the report period.

In the final year of a report period – 2017 in this report – figures are incomplete, in part because of the time associated with legal processes. We therefore estimate final figures for the most recent years taking into account the number of outstanding questionnaires and the accuracy of our estimates in previous years. We examine for statistically significant time trends over the report period. However, because 2017 figures are partly estimates, these are not included in the analysis of trends.

KEY FINDINGS

Suicide numbers and rates

I. Suicide rates in the general population in UK countries show that the lower figures of recent years have been broadly maintained during the report period,[1] although in Wales there appears to have been a rise in 2017. Previously all countries experienced a rise after the 2008 recession and a fall after 2013.

II. Difference in suicide rates remain between the UK countries, with the highest rate in Northern Ireland. The largest differences in rates over the report period were in young adults. In Northern Ireland the highest rates were in people in their 20s whereas in England, Scotland and Wales rates were highest in people in their 40s.

III. There were 1,517 suicides by people under mental health care in the UK in 2017, this figure having fallen in recent years. Over the whole report period 2007-2017, there were 18,024 patient suicides, 28% of suicides in the population, although this percentage was higher in Scotland and lower in Wales. In Wales the number of patient suicides rose in 2017, in line with general population figures.

IV. In England there was a small fall in the number of patient suicides and a significant decrease in the rate, i.e. taking into account the total number of people under mental health care.

[1] Recent ONS figures suggest an increase in 2018

Method of suicide

V. The commonest method of suicide by patients was hanging/strangulation, accounting for 714 patient deaths UK-wide in 2017, almost half (47%) of all patient suicides. Over the report period, deaths by hanging/strangulation increased, most markedly in female patients.

VI. The second commonest suicide method among patients was self-poisoning, accounting for 348 deaths in 2017, almost a quarter (23%) of patient suicides. The main substances taken in fatal overdose were opiates/opioids and the main source (where known) was by prescription.

VII. Suicides by methods resulting in multiple injuries (jumping from a height or in front of a train) accounted for over 200 patient deaths per year. Individual locations often become known locally because they are frequently used.

VIII. New methods of suicide continue to appear in our figures. Inhalation of gases now accounts for 3% of patient suicides, 43 deaths per year.

Clinical care

IX. There were 92 suicides by in-patients in the UK in 2017, around 6% of all patient suicides, continuing a long-term downward trend after a rise in 2015-16. Over the report period around a third of in-patient suicides took place on the ward itself. Many of these deaths were by hanging/strangulation from low-lying ligature points.

X. There were 206 suicides in the 3 months after hospital discharge in 2017, 14% of all patient suicides, a small fall since the previous year, continuing an overall downward trend. The highest risk was in the first 1-2 weeks after discharge and the highest number of deaths occurred on day 3 post-discharge.

XI. In 2017 there were 866 suicides by patients who had a history of alcohol or drug misuse, 57% of all patient suicides UK-wide, higher in Scotland. Only a minority were in contact with specialist substance misuse services.

Suicide in patients aged 75 and over

XII. There were 425 deaths per year in people aged 75 and over. The number increased during the report period, driven by a rise in suicide by older males, although the rate decreased, i.e. taking into account rising patient numbers. 20% of people in this age group who died by suicide were mental health patients, lower than in other age groups.

XIII. These patients were more likely to have depression than other age groups and a higher percentage had been ill for less than a year.

XIV. They were less likely to die by hanging/strangulation. Self-poisoning was more likely to be by paracetamol or paracetamol/opioid compounds.

XV. Conventional risk factors such as self-harm or substance misuse were less common. Living alone, physical illness and bereavement were more common.

Suicide in women aged under 25

XVI. There were 144 deaths per year in females aged under 25, though the number increased over the report period. Around a third of suicides in women in this age group were by mental health patients.

XVII. Compared to older female patients they were more likely to die by hanging/strangulation and less likely to die by self-poisoning.

XVIII. The most common diagnosis was personality disorder; affective disorder (bipolar disorder and depression) was proportionately less common than at other ages, eating disorders more common.

XIX. Most had a history of self-harm and compared to older female patients who died, they more often had a history of alcohol or drug misuse. This clinical complexity - personality disorder, self-harm, substance misuse - was not reflected in risk assessment, the majority being seen as low risk at final contact.

Suicide in patients who are homeless

XX. There were 40 suicides per year in patients who were homeless, although in the last 3 years this figure has been lower.

XXI. Homeless patients who died by suicide were more likely to be male, to be unemployed, to have previously lived alone and to have a history of self-harm, violence and substance misuse.

XXII. They had a wide age range, with age-related differences. Those under 45 had higher rates of substance misuse, including new psychoactive substances, and self-harm. Those over 45 were more likely to have depression and financial difficulties.

Suicide in patients with anxiety disorders

XXIII. There were 86 suicides per year in patients with a primary diagnosis of anxiety disorder, 5% of all patient suicides. The figure has risen during the report period - this could reflect a change in patterns of referral or diagnosis, or an increase in risk.

XXIV. They had a wide age range, with a median age of 47, with more women over 65, though overall the majority were male.

XXV. They had fewer conventional social and clinical risk factors for suicide such as living alone or substance misuse. However, there was a rise in unemployment and financial difficulties over the report period.

XXVI. Most were receiving drug treatment and around a third were taking benzodiazepines. A quarter were receiving some kind of psychological therapy; 8% were under IAPT services at the time of death.

Suicide and the internet

XXVII. There were 65 suicides per year in patients known to have used the internet in ways that were suicide-related. This figure is likely to be an under-estimate. The commonest type of suicide-related internet use was searching for information on suicide method.

XXVIII. The suicide methods used were different from other patients. This group more often used gas inhalation and in deaths by self-poisoning, tranquillisers that are no longer in use were more frequent.

XXIX. Although they were more likely to be young, they were a diverse group in age and diagnosis, including severe mental illness. They were more often employed, less often living alone.

CLINICAL MESSAGES

1. In-patient and post-discharge care remain times of high risk for suicide. Key suicide prevention measures are:
— Safer wards, including removal of low-lying ligature points;
— Awareness of increased risk within the 1st week of admission;
— Comprehensive care planning for discharge and pre-discharge leave;
— Follow-up within 2-3 days of discharge from in-patient care.

2. Alcohol and drugs are common antecedents of suicide. Clinical measures that could help reduce risk are:
— Substance misuse assessment skills in frontline staff;
— Specialist substance misuse clinicians within mental health services;
— Joint working with local drug and alcohol services, with an emphasis on safety.

3. Measures that services can take to reduce risks associated with particular methods of suicide are:
— Safer prescribing in primary and secondary care, with particular attention on opiates/opioids prescribed to people with long-term physical illness;
— Working with local authorities to reduce risk at frequently used locations, i.e. high places and railways;
— Ensuring clinical staff are aware of suicide methods associated with internet use, as a result of information available online or by online purchases.

4. Several of these recommendations are highlighted in our "10 ways to improve safety", an important component of the NHS England and NHS Improvement suicide prevention programme:
— Safer wards;
— Early follow-up after in-patient discharge;
— Addressing alcohol and drug problems through services for "dual diagnosis" patients and outreach teams;
— Safer prescribing.

5. Patients aged 75 and over
Clinical services should be aware of (1) the lower rate of contact with specialist mental health services among those who die by suicide in this age group and the need to work with other agencies where people at risk may attend and (2) different patterns of clinical risk, with more depression, bereavement and physical illness, and lower rates of some common suicide risk factors such as self-harm and substance misuse.

6. Female patients aged under 25
Clinical services should (1) have the breadth of skills to respond to clinical complexity and comorbidities in this group, often including depression, a diagnosis of personality disorder, eating disorders, self-harm, and substance misuse, and in particular (2) be able to offer self-harm care that meets current quality standards, and (3) be aware of the recommendations of the Women's Mental Health Taskforce report.

7. Homeless patients
Clinical services should be aware of (1) different patterns of risk among homeless patients: younger people with self-harm and substance misuse including new psychoactive substances, and older men more likely to have depression and financial problems and (2) the need for specialist expertise in working with homeless people in areas where homelessness is a severe problem.

8. Patients with anxiety disorders
Clinical services should be aware of (1) the rise in suicide in patients with anxiety disorders, despite fewer conventional risk factors and (2) that suicide prevention in this group should include reduced prescribing of benzodiazepines, and access to IAPT services.

9. Internet risks
Clinicians need to be aware that (1) suicide-related internet use is a potential risk for all patients, especially but not only younger age groups and that (2) there is a need to enquire about online behaviour as part of assessing risk.

CONTENTS

INTRODUCTION

The 2019 annual report from the National Confidential Inquiry into Suicide and Safety in Mental Health (NCISH) provides findings relating to people who died by suicide in 2007-2017 across all UK countries. Additional figures are presented on people convicted of homicide.

The NCISH database includes a national case series of suicides by people who have been in contact with mental health services in the previous 12 months. The overall database now stands at over 136,000 suicides in the general population, including over 35,000 patients by this 12 month definition.

Complete details of the NCISH methodology are provided in our previous reports and on our website at: **www.manchester.ac.uk/ncish**

For over 20 years, NCISH has provided definitive national figures on suicide and homicide, to patients, health services and governments, helping to inform the development of policy and strategies for safer care locally, nationally and internationally. NCISH findings have also contributed to local patient safety audits and national clinical guidelines. Our publications have included major UK and national reports, topic-specific reports and peer-reviewed academic papers (see pages 77-79 for further information).

In this report, findings are presented for England, Northern Ireland, Scotland, and Wales for suicide (based on date of death), homicide (based on year of conviction) and homicide-suicide (based on date of offence, in England & Wales only). Our suicide figures differ from the Office for National Statistics (ONS) who present figures by date of death registration.

In our annual reports, figures for the most recent year - in this case 2017 - are incomplete, in part because of the time associated with legal processes. We therefore adjust estimates for the most recent years according to the number of unreturned questionnaires and the accuracy of the previous year's estimates. In analysing trends the final year is not included because of these estimations. Estimated numbers in the final year are presented as dotted lines in the figures or in a different shade in the bar diagrams. Changes in figures from previous annual reports occur as further information is received.

We have followed guidance from ONS on disclosure control to protect confidentiality within death statistics, and have omitted numbers less than three, including zero. We have applied this rule to all data in this report.

2017 patient data from Northern Ireland were not supplied as a result of the new GDPR implications. All parties involved have worked together to resolve any issues and data will be supplied as normal in future reports. Therefore we present data on general population suicides only, but include data on patient suicide deaths for the period 2007-2016 in UK comparisons. We no longer present information relating to homicide in Northern Ireland as we are unable to obtain conviction data.

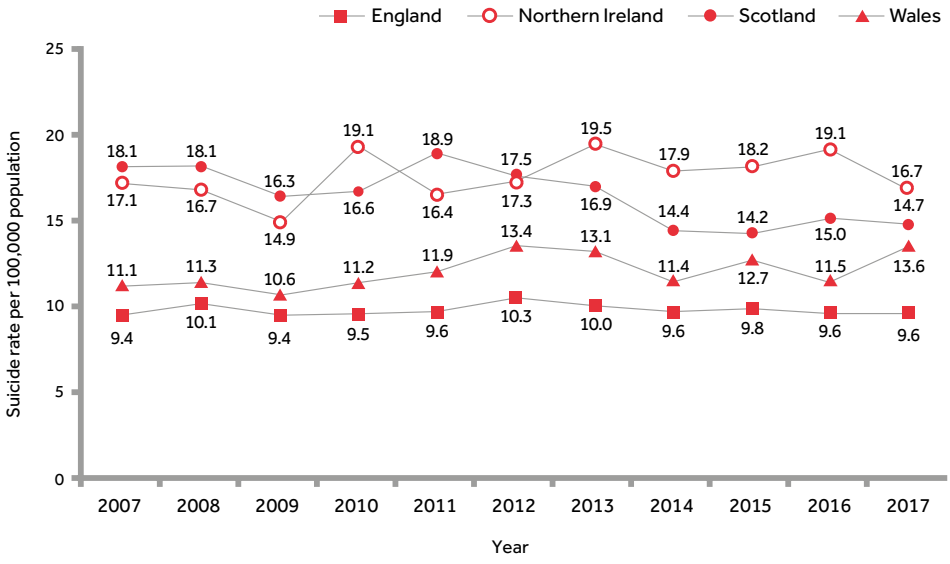
UK-WIDE FINDINGS

SUICIDE IN THE UK

Suicide rates for each UK country are shown in Figure 1. Northern Ireland has had the highest general population rates in recent years. Scotland has a higher suicide rate in 2017 than England and Wales, but the rate has fallen significantly since 2011. The rate in Wales was higher in 2017 but this single year increase should be viewed cautiously at this stage.

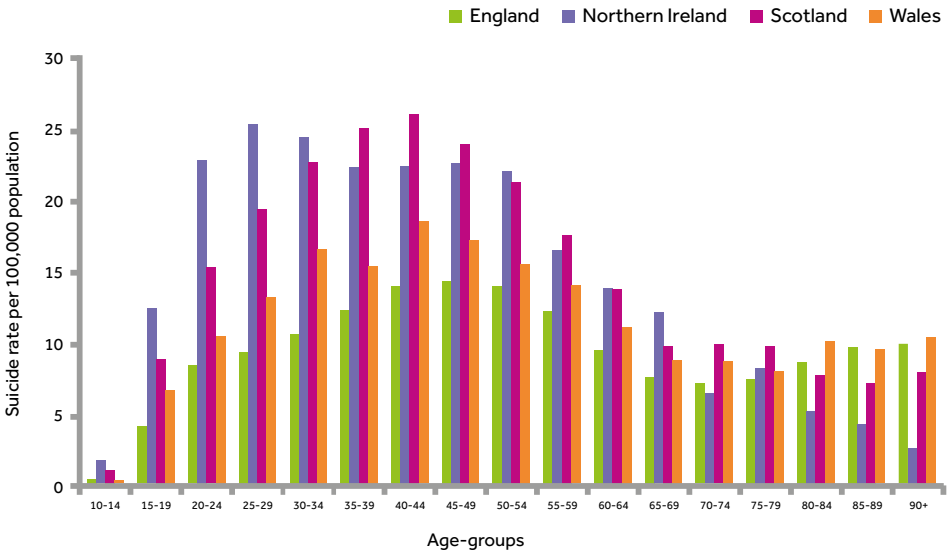
In all countries except Northern Ireland the rates were highest in the middle-aged groups (Figure 2). The biggest differences between UK rates were in the younger age groups.

Figure 1: Suicide rates in the general population, by UK country



Note: Recent ONS figures suggest an increase in 2018.

Figure 2: Suicide rates in the general population by age-group, by UK country (2007-2017)



PATIENT SUICIDE

There were 18,024 suicides by patients (i.e. people in contact with mental health services within 12 months of suicide) in the UK in 2007-2017 (excluding data in Northern Ireland in 2017), 28% of all general population suicides. This figure was slightly higher in Scotland and lower in Wales (Table 1). Overall the highest figures were in 2011-13 (Figure 3), with an apparent fall since then – broadly, the figures for patients reflected those for the general population (Table 2).

We were also notified of 22 patient suicides in Jersey, from a general population total of 61 in 2012-2017 (36%). In Guernsey in 2015-2017 (available years of data), we were notified of 22 suicides in the general population, 9 of whom were patients. Suicides by mental health in-patients continue to fall - the average for 2007-11 being 129, and for 2012-16 being 110 (Table 3). However, the fall in 2007-11 (19%) has become more modest in 2012-16, i.e. 12% (Figure 4).

Table 1: Suicide figures by UK country (2007-2017)

	England	Northern Ireland	Scotland	Wales	UK
General population	50,322	3,050	8,542	3,593	65,507
Mental health patients	13,806 (27%)	731 (24%)*	2,685 (31%)	802 (22%)	18,024 (28%)*

*patient data unavailable in Northern Ireland in 2017

Table 2: Patient suicide: numbers by year and UK country

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
England	1,144	1,213	1,168	1,264	1,339	1,379	1,322	1,234	1,265	1,262	1,216
Northern Ireland	76	76	64	73	67	77	78	73	77	70	*
Scotland	282	230	221	239	285	264	267	222	227	225	223
Wales	71	56	70	71	68	95	99	61	79	54	78
Total	1,573	1,575	1,523	1,647	1,759	1,815	1,766	1,590	1,648	1,611	1,517*

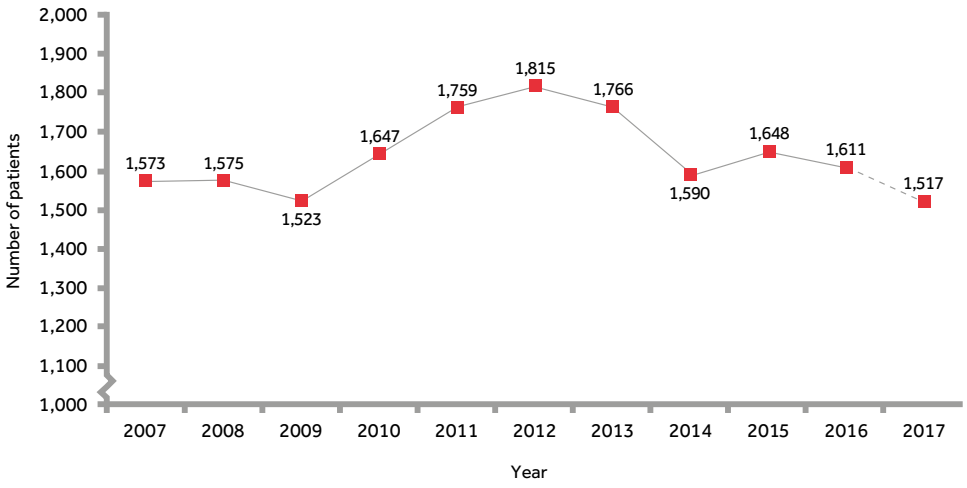
Note: figures from 2015-2017 include estimates based on late notifications
*patient data unavailable in Northern Ireland in 2017

Table 3: Patient suicide: number of in-patient suicides by year and UK country

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
England	122	104	100	92	101	93	96	76	89	88	73
Northern Ireland	3	3	5	<3	3	3	3	<3	<3	<3	*
Scotland	27	15	11	11	20	19	16	12	19	16	13
Wales	4	3	7	10	3	6	4	3	5	3	5
Total	156	125	123	113	127	121	119	91	113	107	91*

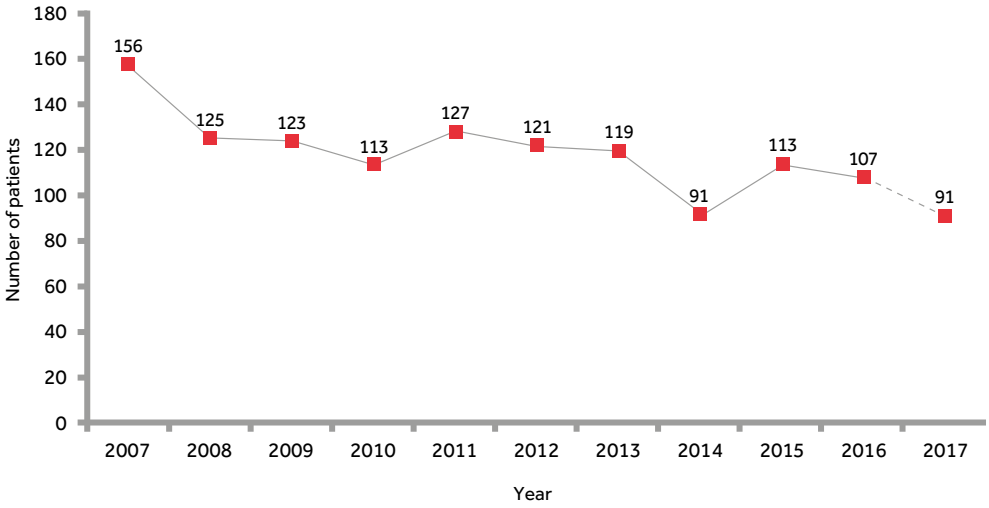
Note: figures from 2015-2017 include estimates based on late notifications;
* patient data unavailable in Northern Ireland in 2017

Figure 3: Patient suicide in the UK: numbers by year



Note: excludes data in Northern Ireland in 2017

Figure 4: Patient suicide in the UK: number of in-patient suicides by year

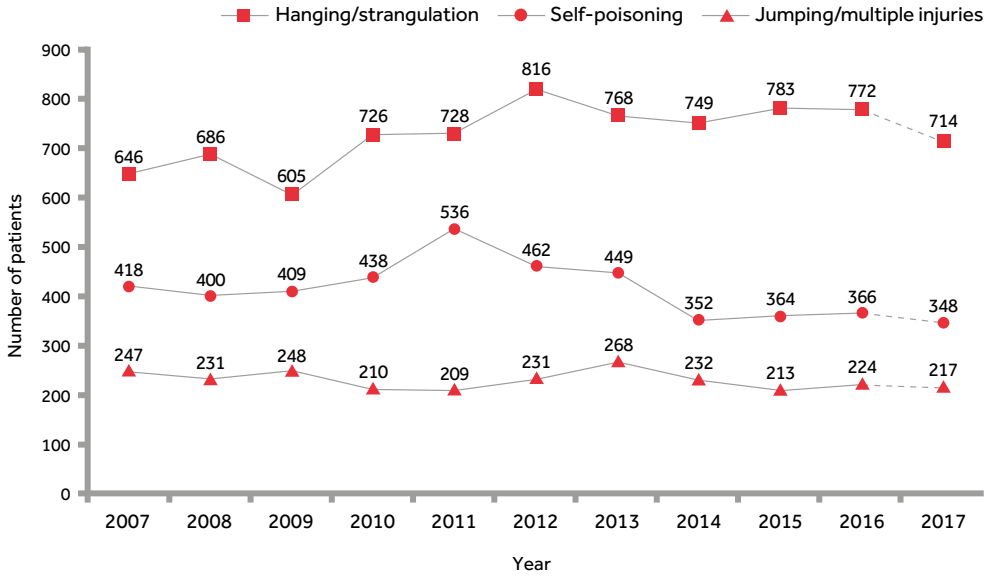


Note: excludes data in Northern Ireland in 2017

Methods of suicide in patients are broadly similar across the UK countries, with hanging/strangulation the most common method overall (44%) followed by self-poisoning (overdose) (25%) (Figure 5). There has been a rise in the number of deaths by hanging/strangulation in male and female patients over the report period. Between 2007 and 2016 the number of female patients who died by hanging/strangulation increased by 36%; for males the increase was by 14%. Opiates (including opiate compounds) are the most commonly used type of drug in fatal overdose and also explain the peak in self-poisoning deaths around 2011.

Less frequent methods were drowning (5%), gas inhalation (3%), cutting and stabbing (3%), suffocation/asphyxiation (2%) and firearms (1%).

Figure 5: Main methods of suicide by patients in the UK



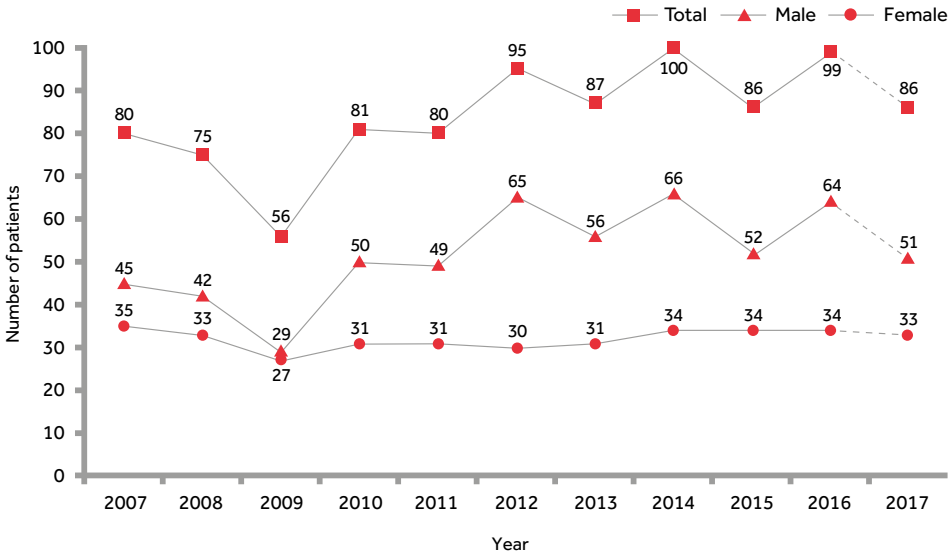
Note: excludes data in Northern Ireland in 2017

SUICIDE BY PEOPLE AGED 75 AND OVER (UK)

In the UK in 2007-2017, there were 4,675 suicides in the general population by those aged 75 and over, 7% of all suicides, an average of 425 deaths per year. The number of suicides in men aged 85 and over increased.

925 (20%) were suicides by patients, i.e. people who had been in contact with mental health services in the previous 12 months, an average of 84 per year. The number of patients increased by 24% over the report period (Figure 6). The increase was in male patients only and in those aged 75-84. However, rates of patient suicide in this age group - taking into account the rising number of patients under mental health care[2] - fell between 2010 and 2016 in both men and women.

Figure 6: Suicide by patients aged 75 and over (UK)

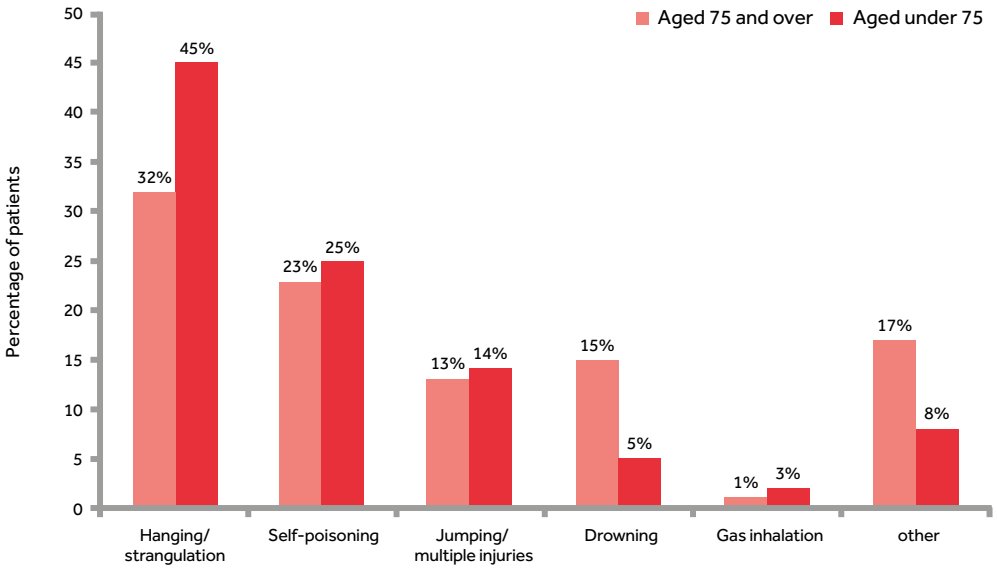


Note: Numbers in 2016 and 2017 have been estimated to account for incomplete data; for these years the estimation methodology means that the male and female numbers do not total the overall numbers.

The most common methods of suicide in elderly patients were hanging/ strangulation and self-poisoning (Figure 7). Suicide by drowning was proportionally more common compared to younger patients; this was the case in all UK countries and was a particular feature for women (19% v. 13% of men). The most common drug types used in self-poisoning were paracetamol and paracetamol/opiate compounds – these were more likely to be used in overdose compared to younger patients (17% v. 6% and 16% v. 6% respectively); opiates were less likely to be used (14% v. 31%).

[2]Mental Health Services Data Set. **https://data.gov.uk/dataset/mental-health-services-monthly-statistics**

Figure 7: Method of suicide in patients aged 75 and over (UK, 2007-2017)



The proportion of patients aged 75 and over with dementia has doubled over the report period, from 8% in 2007-2011 to 16% in 2012-2016. The proportion with affective disorder (bipolar disorder and depression) has fallen from 63% to 55% over this time. Compared to younger patients those aged 75 and above were more often female and living alone (Table 4). A third had been ill for less than 12 months (Table 5), significantly more than younger patients (20%). Fewer elderly patients had a secondary psychiatric illness, but over half (52%) had a comorbid physical health condition, most often cardiovascular disease (47%), musculoskeletal disease (22%), cancer (17%) and respiratory disease (17%).

Factors commonly associated with suicide, including a history of self-harm, alcohol or drug misuse, violence, or recent adverse life events (including financial difficulties) were all less common (Table 6). However, they had more often experienced a recent bereavement (7% v. 5%).

Table 4: Demographic characteristics of patients aged 75 and over who died by suicide (UK, 2007-2017)

	Aged 75 and over N=925	
	Number	%
Female	343	38 ▲
Not currently married*	526	61 ▼
Living alone	469	54 ▲
Black, Asian and minority ethnic group	31	4 ▼

▲▼ = significantly ($p<0.01$) higher or lower than patients aged under 75;
see supplementary information for comparative percentages

*includes those who are divorced/separated, single, and widowed

Table 5: Clinical and service contact characteristics of patients aged 75 and over who died by suicide (UK, 2007-2017)

	Aged 75 and over N=925	
	Number	%
Clinical features		
Primary diagnosis:		
Schizophrenia and other delusional disorders	39	4 ▼
Affective disorder (bipolar disorder and depression)	503	58 ▲
Alcohol dependence/misuse	11	1 ▼
Drug dependence/misuse	<3	<1 ▼
Personality disorder	9	1 ▼
Dementia	109	13 ▲
Any secondary diagnosis	296	34 ▼
Duration of illness (<12m)	261	33 ▲
Priority groups		
In-patients	47	5
Recent (<3 months) discharge	104	12 ▼
Under crisis resolution/home treatment services	90	11 ▼
Missed last contact	82	10 ▼
Non-adherence with medication	61	7 ▼
Service contact		
First contact with mental health services <12 months	316	38 ▲
Last admission was a re-admission	33	9
Last contact within 7 days of death	421	48
Immediate risk: low or none	735	91 ▲
Long-term risk: low or none	535	68 ▲

▲▼ = significantly (p<0.01) higher or lower than patients aged under 75;
see supplementary information for comparative percentages

Table 6: Behavioural characteristics of patients aged 75 and over who died by suicide (UK, 2007-2017)

	Aged 75 and over N=925	
	Number	%
Behavioural features		
History of self-harm	394	46 ▼
History of violence	36	4 ▼
History of alcohol misuse	91	11 ▼
History of drug misuse	21	2 ▼

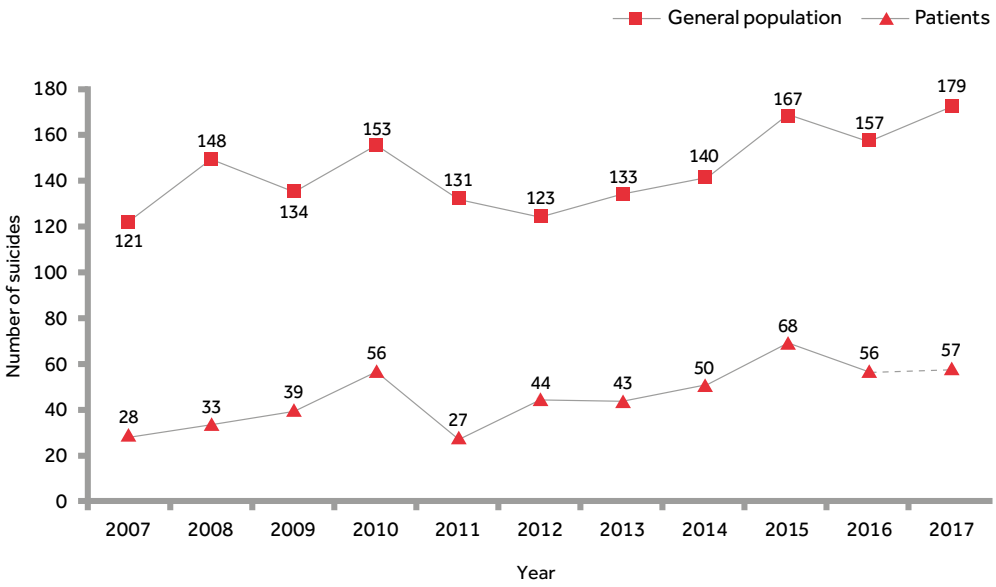
▲▼ = significantly (p<0.01) higher or lower than patients aged under 75;
see supplementary information for comparative percentages

SUICIDE BY FEMALE PATIENTS AGED UNDER 25 (UK)

In the UK in 2007-2017, there were 1,586 suicides in the general population by young women under the age of 25, an average of 144 deaths per year (Figure 8). The number and rate of general population suicides by women under 25 has increased over the report period, peaking in 2015. These deaths accounted for 10% of all female suicides in the UK, a similar proportion compared to young men (10%). Compared to older women, suicide by young women was significantly less often by self-poisoning (21% v. 39%) and more often by hanging/strangulation (58% v. 34%).

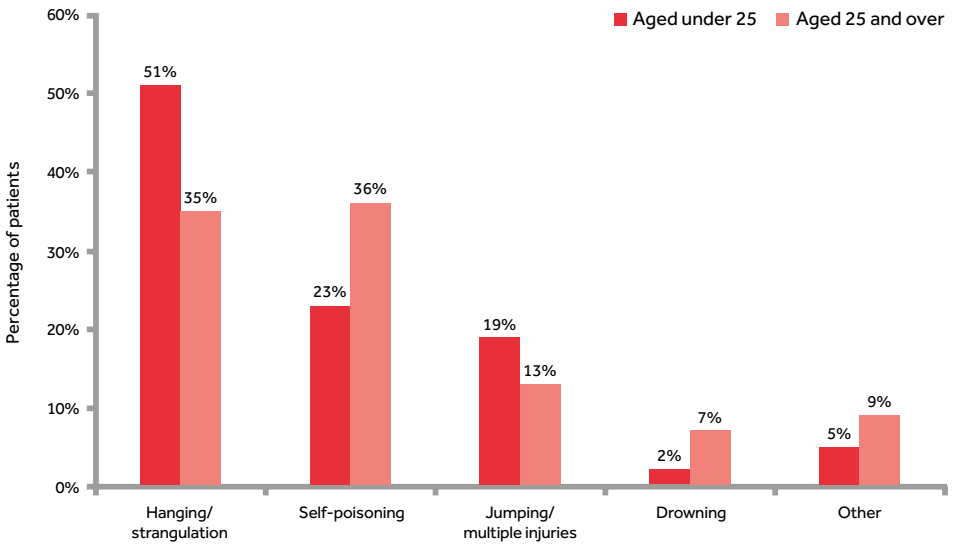
A third (501, 32%) of these were by women who had been in contact with mental health services in the previous 12 months, an average of 46 per year (Figure 8). The proportion in contact with services was lower than for older women aged 25 and above (39%). The number of young female patient suicides increased in line with the general population, peaking in 2015 (Figure 8).

Figure 8: Suicide by women aged under 25 in the UK



The most common methods of suicide were hanging/strangulation and self-poisoning (Figure 9). Young women were more likely to die by hanging/strangulation or jumping/multiple injuries compared to older women, and self-poisoning was less common. There has been an increase in deaths by hanging/strangulation over the report period, with a peak in 2015, though the reported number has fallen since.

Figure 9: Method of suicide in female patients aged under 25 v. 25 and over (UK, 2007-2017)



Tables 7-9 show the characteristics of female patients aged under 25. A diagnosis of personality disorder was more common (28% v. 14%) and fewer had affective disorder (bipolar disorder and depression) than older women (24% v. 49%). Around 10% had a diagnosis (primary or secondary) of eating disorder, more often than older women (3%).

88% had a history of self-harm; higher than women aged 25 and over (72%). This high proportion was highlighted in our 2018 report, and there is evidence that the prevalence of life-time reported self-harm is also increasing in the general population. Over a third (37%) had a combination of previous self-harm, a co-morbid diagnosis (mostly personality disorder or alcohol/drug dependence) and a history of alcohol or drug misuse, indicating clinical complexity. They also more often missed their last contact with services compared to those aged 25 and over (29% v. 23%).

Recent adverse life events were experienced by 45% of young female patients, with relationship break-up a more common event than in older women (11% v. 5%). Younger women were more likely to be a victim of a violent crime (3% v. 1%).

Table 7: Demographic characteristics of female patients aged under 25 who died by suicide (UK, 2007-2017)

	Women aged under 25 N=501	
	Number	%
Not currently married	431	93 ▲
Living alone	114	25 ▼
Unemployed	224	49 ▲
On long-term sick leave	25	6 ▼
Black, Asian and minority ethnic group	58	12 ▲
Homeless	17	4 ▲

▲▼ = significantly ($p<0.01$) higher or lower than female patients aged 25 and over; see supplementary information for comparative percentages

Table 8: Clinical and service contact characteristics of female patients aged under 25 who died by suicide (UK, 2007-2017)

	Women aged under 25 N=501	
	Number	%
Clinical features		
Primary diagnosis:		
Schizophrenia and other delusional disorders	40	8
Affective disorder (bipolar disorder and depression)	113	24 ▼
Alcohol dependence	26	6
Drug dependence	34	7 ▲
Personality disorder	133	28 ▲
Eating disorders	21	4 ▲
Any secondary diagnosis	254	55
Duration of illness (<12 months)	93	22 ▲
Priority groups		
In-patients	45	9
Recent (<3 months) discharge	64	15
Under crisis resolution/home treatment services	45	10 ▼
Missed last contact	123	29 ▲
Non-adherence with medication	56	13
Service contact		
First contact with mental health services <12 months	131	30 ▲
Last admission was a re-admission	33	18
Last contact within 7 days of death	222	46
Immediate risk: low or none	338	79
Long-term risk: low or none	193	48 ▼

▲▼ = significantly ($p<0.01$) higher or lower than female patients aged 25 and over; see supplementary information for comparative percentages

Table 9: Behavioural characteristics of female patients aged under 25 who died by suicide (UK, 2007-2017)

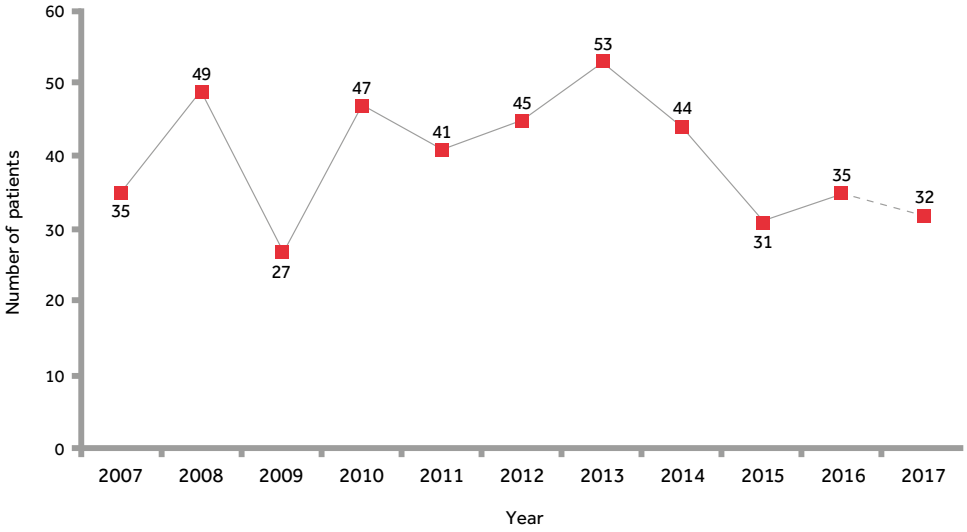
	Women aged under 25 N=501	
	Number	%
History of self-harm	413	88 ▲
History of violence	83	18 ▲
History of alcohol misuse	221	48 ▲
History of drug misuse	203	44 ▲

▲▼ = significantly ($p<0.01$) higher or lower than female patients aged 25 and over; see supplementary information for comparative percentages

SUICIDE BY PATIENTS WHO ARE HOMELESS (UK)

In the UK in 2007-2017, there were 439 patients who died by suicide who were reported to be homeless or of no fixed abode by clinicians. This represents 3% of all patient suicides, an average of 40 deaths per year. There was no overall trend over the report period though lower numbers were found in the most recent years (Figure 10).

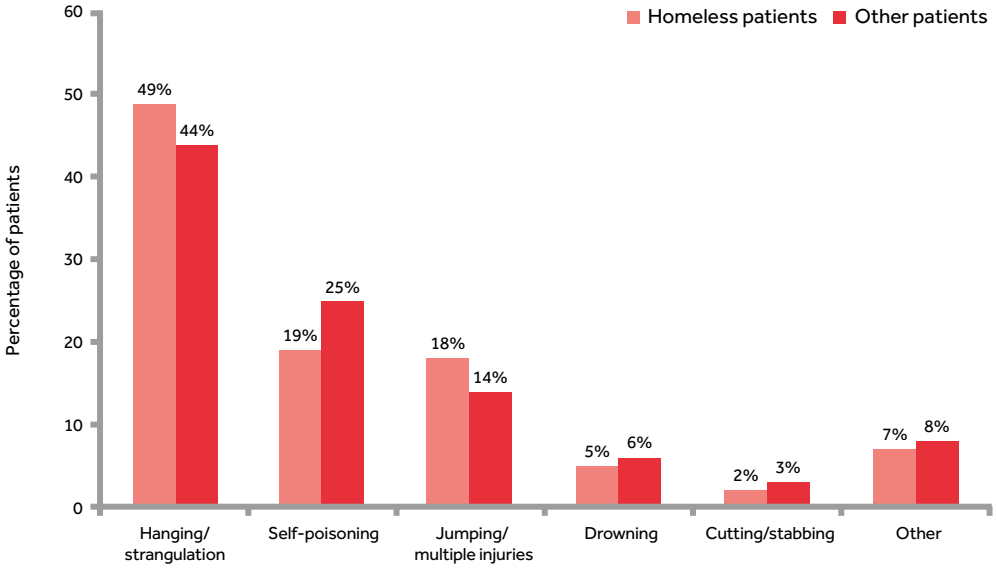
Figure 10: Patient suicide: number who were homeless in the UK



The characteristics of homeless patients are shown in Tables 10-12. They were mainly male and 80% were unemployed. 71% were aged under 45 compared to 46% of other patients. They had higher rates of alcohol and drug misuse, violence and self-harm. Recent financial problems (44% v. 16%) and recent housing insecurities (32% v. 4%) were also significantly more common compared to non-homeless patients. 94% of homeless patients were registered with a GP. In 2011-2017, there were 6 (2%) homeless patients who had been a former member of the Armed Forces.

The main methods of suicide by homeless patients were hanging/strangulation, self-poisoning and jumping/multiple injuries (Figure 11). Homeless patients were less likely to die by self-poisoning. The substances used in self-poisoning were more often opiates/opiate compounds (53% v. 36%), typically heroin (43%) and methadone (43%). Opiate overdose was particularly common among homeless patients aged under 45, accounting for 60% of deaths by self-poisoning in this age-group.

Figure 11: Method of suicide in homeless patients v. other patients (UK, 2007-2017)



Alcohol (20% v. 9%) and drug (18% v. 5%) dependence/misuse were more common in homeless patients compared to other patients, whilst affective disorder (bipolar disorder and depression) was less common (19% v. 43%).

Since 2014, we have collected data on the misuse of new psychoactive substances, though this information is often unknown to clinicians. Between 2014 and 2017, 19 (48% excluding unknowns) homeless patients had a history of misusing new psychoactive substances compared to 13% of other patients.

Characteristics differed by age, with homeless patients aged 45 and over being more likely to have depressive illness (25% v. 10%) and to have reported recent financial problems (60% v. 37%) compared to younger homeless patients.

In contrast, those aged under 45 were more often diagnosed with drug dependence/misuse (21% v. 9%) and had a history of self-harm (78% v. 65%), alcohol misuse (79% v. 68%) and drug misuse (75% v. 40%). They had more often misused new psychoactive substances (60% excluding unknowns v. 10%) and reported recent problems/arguments with their families (14% v. 5%).

Table 10: Demographic characteristics of homeless patients who died by suicide (UK, 2007-2017)

	Homeless patients N=439	
	Number	%
Age: median (range)	38 (16-72)	▼
Male	356	83 ▲
Not currently married	381	92 ▲
Living alone	283	70 ▲
Unemployed	333	80 ▲
On long-term sick leave	28	7 ▼
Black, Asian and minority ethnic group	31	7

▲▼ = significantly ($p<0.01$) higher or lower than other patients; see supplementary information for comparative percentages

Table 11: Clinical and service contact characteristics of homeless patients who died by suicide (UK, 2007-2017)

	Homeless patients N=439		
	Number	%	
Clinical features			
Primary diagnosis:			
Schizophrenia and other delusional disorders	60	14	
Affective disorder (bipolar disorder and depression)	79	19	▼
Alcohol dependence	84	20	▲
Drug dependence	75	18	▲
Personality disorder	56	13	▲
Any secondary diagnosis	261	62	▲
Duration of illness (<12 months)	76	20	
Priority groups			
In-patients	71	17	▲
Recent (<3 months) discharge	99	28	▲
Under crisis resolution/home treatment services	42	12	
Missed last contact	114	33	▲
Non-adherence with medication	57	15	
Service contact			
First contact with mental health services <12 months	138	35	▲
Last admission was a re-admission	31	16	
Last contact within 7 days of death	203	48	
Immediate risk: low or none	286	78	▼
Long-term risk: low or none	174	49	▼

▲▼ = significantly (p<0.01) higher or lower than other patients; see supplementary information for comparative percentages

Table 12: Behavioural characteristics of homeless patients who died by suicide (UK, 2007-2017)

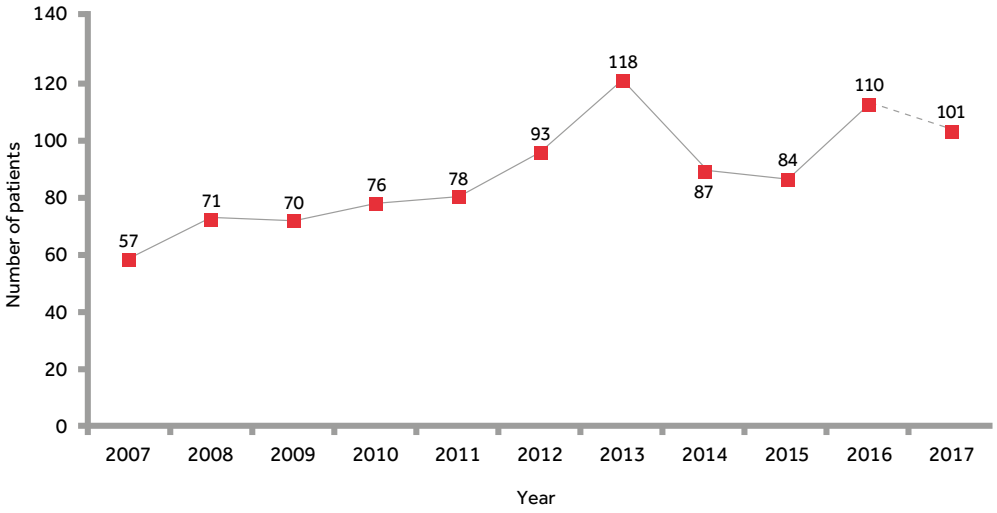
	Homeless patients N=439		
	Number	%	
History of self-harm	306	74	▲
History of violence	183	48	▲
History of alcohol misuse	313	76	▲
History of drug misuse	268	65	▲

▲▼ = significantly (p<0.01) higher or lower than other patients; see supplementary information for comparative percentages

SUICIDE BY PATIENTS WITH ANXIETY DISORDERS (UK)

In the UK in 2007-2017, there were 945 suicides in patients who had a primary diagnosis of an anxiety disorder (including anxiety, phobia, obsessive compulsive disorder, panic disorder and post-traumatic stress disorder). This represents 5% of all patient suicides, an average of 86 deaths per year. The number with an anxiety disorder has increased during the report period (Figure 12) as has the proportion, from 4% of all patients in 2007-2011 to 6% in 2012-2016. There was an increase in the number and proportion of patients aged 25-44 and 45-64 with anxiety disorder.

Figure 12: Suicide by patients with an anxiety disorder (UK)



The most common methods of suicide were hanging/strangulation (46%) followed by self-poisoning (24%). Patients with an anxiety disorder were significantly less likely to die by jumping/multiple injuries compared to other patients (11% v. 14%). Opiates and opiate compounds accounted for over a third (35%) of all drugs used in self-poisoning, similar to other patients (37%). Antidepressants (typically tricyclics or SSRI/SNRIs) were used in 22%, non-opiate analgesics in 9%, and antipsychotic drugs were used in 7%. Benzodiazepines were used in 6% of all deaths by self-poisoning.

Tables 13-15 show the characteristics of patients with an anxiety disorder. 65% were male. The average age was 47 but there was a wide range of patient ages between 14 and 94. Patients with anxiety disorders were less likely than other patients to live alone (41% v. 49%) or be unemployed (40% v. 47%). However, the proportion who were unemployed significantly increased from 35% in 2007-2011 to 43% in 2012-2016, as did those reporting financial problems (from 2% in 2007-2011 to 15% in 2012-2016).

Fewer patients with anxiety disorders had a history of common risk factors, e.g. self-harm (57% v. 67%), alcohol misuse (38% v. 49%) or drug misuse (27% v. 37%).

Two thirds (66%) were also suffering a comorbid psychiatric illness, more than other patients (51%). This was most often depressive illness (37%). The majority (86%) of patients with anxiety disorders were receiving some form of drug treatment, similar to other patients (84%); these were most often SSRIs/SNRIs (60%) or benzodiazepines (31%). A quarter were receiving psychological treatment, more than other patients (25% v. 15%). 8% were receiving care under Improving Access to Psychological Therapies (IAPT)[†] services at the time of death.

[†] Improving Access to Psychological Therapies (IAPT) services provide evidence based psychological therapies to people with anxiety disorders and depression

Table 13: Demographic characteristics of patients with anxiety disorders (UK, 2007-2017)

	Patients with anxiety disorders N=945	
	Number	%
Age: median (range)	47 (14-94)	
Male	589	65
Not currently married	538	62 ▼
Living alone	355	41 ▼
Unemployed	348	40 ▼
On long-term sick leave	110	13
Black, Asian and minority ethnic group	39	4 ▼

▲▼ = significantly (p<0.01) higher or lower than other patients; see supplementary information for comparative percentages

Table 14: Clinical and service contact characteristics of patients with anxiety disorders (UK, 2007-2017)

	Patients with anxiety disorders N=945	
	Number	%
Clinical features		
Any secondary diagnosis	598	66 ▲
Duration of illness (<12 months)	203	23
Priority groups		
In-patients	60	7
Recent (<3 months) discharge	113	13
Under crisis resolution/home treatment services	126	15
Missed last contact	198	24
Non-adherence with medication	97	12
Service contact		
First contact with mental health services <12 months	240	28
Last admission was a re-admission	42	13
Last contact within 7 days of death	407	45
Immediate risk: low or none	720	87
Long-term risk: low or none	528	66 ▲

▲▼ = significantly (p<0.01) higher or lower than other patients; see supplementary information for comparative percentages

Table 15: Behavioural characteristics of patients with anxiety disorders (UK, 2007-2017)

	Patients with anxiety disorders N=945	
	Number	%
History of self-harm	505	57 ▼
History of violence	123	14 ▼
History of alcohol misuse	331	38 ▼
History of drug misuse	236	27 ▼

▲▼ = significantly ($p<0.01$) higher or lower than other patients; see supplementary information for comparative percentages

SUICIDE-RELATED INTERNET USE (UK, 2011-2017)

We have collected data on whether there was evidence of suicide-related internet use since 2011. In 2011-2017, there were 457 (7% excluding unknowns) patients with evidence of suicide-related internet use (see Box 1), an average of 65 deaths per year. The number did not change over this period. As these figures are based on clinical reports, they are likely to underestimate how often this occurs.

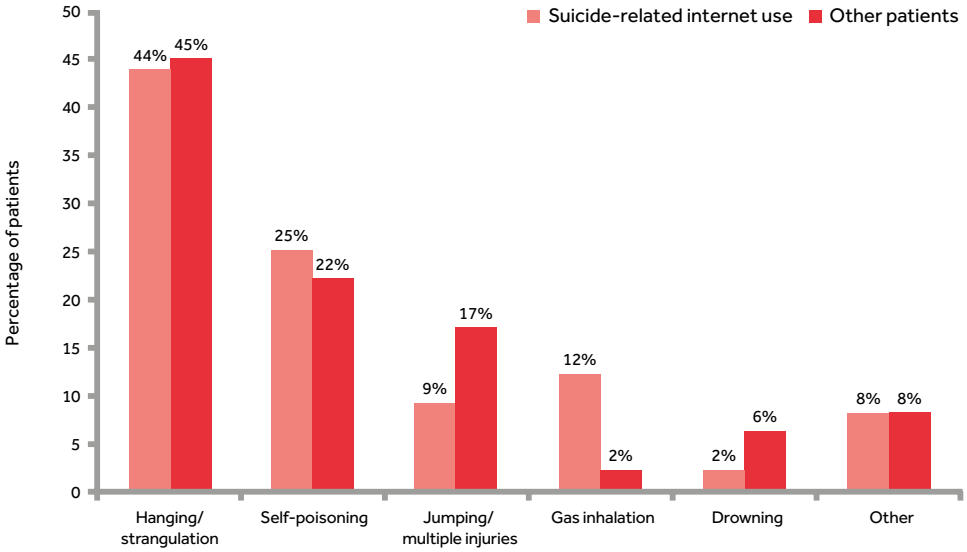
Box 1: Suicide-related internet use

	Total =457	
	Number	%
Obtained information (e.g. method details) on how to die by suicide	357	5%
Visited websites that may have encouraged suicide	204	3%
Communicated suicidal ideas or intent online	37	<1%

Note: the numbers do not total 457 as there was evidence of more than one type of suicide-related internet use for some patients

Similar to other patients, hanging/strangulation and self-poisoning were the most common methods of suicide (Figure 13). Method of suicide was more often by self-poisoning and gas inhalation and less often by jumping/multiple injuries and drowning compared to other patients. The most common substances used in fatal overdose were older tranquiliser drugs which are rarely prescribed and may have been bought online; these were used in 25% of all deaths by self-poisoning, significantly more than other patients (<1%).

Figure 13: Method of suicide in patients with suicide-related internet use v. other patients (UK, 2011-2017)



Tables 16-18 show the characteristics of patients with suicide-related internet use. 62% were male, similar to the total sample (66%). The average age was 41 (range 12 to 90). They were younger, being more often under 45 (57% v. 43%) or under 25 (17% v. 7%) compared to other patients. More were in paid employment (29% v. 18%) or were a full-time student (6% v. 2%). Fewer were living alone (42% v. 48%).

They were more likely than other patients to have a primary diagnosis of depressive illness (39% v. 33%) or personality disorder (15% v. 10%). They were less likely to have schizophrenia and other delusional disorders (10% v. 19%) or alcohol (2% v. 6%) or drug (2% v. 5%) dependence/misuse. In 32% the first contact with mental health services was within a year, significantly more than other patients (23%).

Over half (53%) had experienced recent adverse life events, more than the total sample (44%). Serious financial difficulties in the previous 3 months were reported in 21%, more than in other patients (15%). Other life events included relationship break-up (12%) and work problems (8%).

Table 16: Demographic characteristics of patients with suicide-related internet use (UK, 2011-2017)

	Patients with suicide-related internet use N=457	
	Number	%
Age: median (range)	41 (12-90)	
Male	284	62
Not currently married	343	76
Living alone	186	42 ▼
Unemployed	170	38 ▼
On long-term sick leave	57	13
Black, Asian and minority ethnic group	34	7

▲▼ = significantly ($p<0.01$) higher or lower than other patients; see supplementary information for comparative percentages

Table 17: Clinical and service contact characteristics of patients with suicide-related internet use (UK, 2011-2017)

	Patients with suicide-related internet use N=457	
	Number	%
Clinical features		
Primary diagnosis:		
Schizophrenia and other delusional disorders	46	10 ▼
Affective disorder (bipolar disorder and depression)	209	46
Alcohol dependence	9	2 ▼
Drug dependence	9	2 ▼
Personality disorder	68	15 ▲
Any secondary diagnosis	248	55
Duration of illness (<12 months)	114	27 ▲
Priority groups		
In-patients	32	7
Recent (<3 months) discharge	71	17
Under crisis resolution/home treatment services	93	22 ▲
Missed last contact	91	22
Non-adherence with medication	75	17 ▲
Service contact		
First contact with mental health services <12 months	141	32 ▲
Last admission was a re-admission	37	18
Last contact within 7 days of death	268	59
Immediate risk: low or none	278	66 ▼
Long-term risk: low or none	145	36 ▼

▲▼ = significantly ($p<0.01$) higher or lower than other patients; see supplementary information for comparative percentages

Table 18: Behavioural characteristics of patients with suicide-related internet use (UK, 2011-2017)

	Patients with suicide-related internet use N=457	
	Number	%
History of self-harm	305	68
History of violence	47	11 ▼
History of alcohol misuse	156	35 ▼
History of drug misuse	127	29

▲▼ = significantly ($p<0.01$) higher or lower than other patients; see supplementary information for comparative percentages

HOMICIDE IN THE UK

During 2007-2017 there were 732 mental health patients convicted of a homicide offence. The number of convictions has fallen steadily during this period.

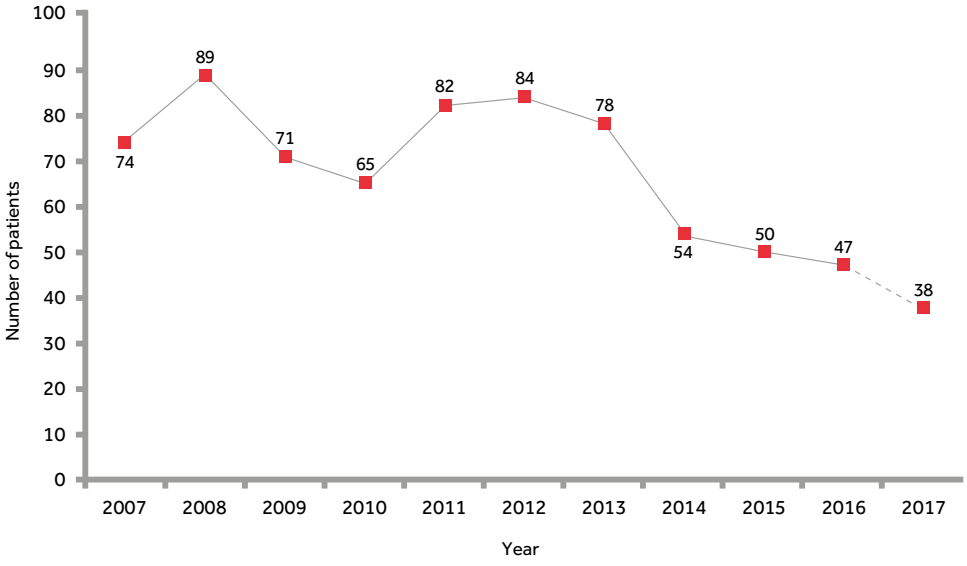
11% of people convicted of homicide were mental health patients (Table 19). Across countries, this figure was higher in Scotland where the general population homicide rates are also higher.

Table 19: Characteristics of homicide offenders by UK country (2007-2017)

General population	England N=5,368 N (%)	Northern Ireland* N=171 N (%)	Scotland N=789 N (%)	Wales N=269 N (%)	UK N=6,597 N (%)
Mental health patients	568 (11%)	15 (9%)	116 (15%)	33 (12%)	732 (11%)

* Northern Ireland data between 2007-2014

Figure 14: Patient homicide in the UK: numbers by year



Note: data incomplete for Northern Ireland

YOU ASKED US

We publish our responses to requests for information on our website. Here we present data requests from the previous 12 months. We are unable to release any information that would identify a healthcare organisation, and we will only publish aggregate figures of 3 or more. We only provide analysis on datasets that have been used in our most recent annual report. If you have a question that you think we could answer, please email us at ncish@manchester.ac.uk.

Suicide in the young lesbian, gay, bisexual or transgender (LGBT) population

Between 2014 and 2015 (the period of our 2017 Suicide by Children and Young People report) there were 13 LGBT young people aged under 20 who died by suicide; 9 were homosexual and 4 were bisexual. 4 were reported to be uncertain about their sexual orientation. None were known to have identified as transgender.

Suicide in patients aged under 18 and the number who were in-patients

In the UK, between 2006 and 2016 (the period of our 2018 annual report) there were 182 (1% of the total number of patient suicide deaths in this period) children (under the age of 18) who died by suicide or undetermined death. Data on the year of death are shown in the table below:

Number of patients aged under 18 by year (UK)

Year	Number
2006	17
2007	11
2008	11
2009	10
2010	23
2011	11
2012	19
2013	19
2014	19
2015	22
2016	20
Total	182

Number of patients by age (UK, 2006-2016)

Age	Number	%
<13	5	3
13	7	4
14	11	6
15	33	18
16	44	24
17	82	45
Total	**182**	

In this period (2006-2016), 14 children aged under 18 were in-patients of psychiatric settings at the time of their death.

Suicide in those aged 10-18 in the general population and in those in contact with mental health services (England, 2000-2013)

There were 1,409 suicide deaths by people aged 10-18 between 2000-2013 in England. Of these, there were 220 (16%) suicide deaths by patients aged 10-18; 33 (10%) were 10-15 years old and 187 (17%) were 16-18 years old.

Number of suicides by people aged 10-18 by year (England, 2000-2013)

	General population			Patients
Year	Age group		Total aged 10-18	Total aged 10-18
	10-15 years N	16-18 years N	N	N
2000	31	97	128	14
2001	20	89	109	11
2002	20	87	107	18
2003	16	78	94	12
2004	23	86	109	19
2005	19	72	91	10
2006	24	77	101	20
2007	20	66	86	12
2008	22	77	99	13
2009	20	67	87	11
2010	22	67	89	22
2011	23	83	106	14
2012	20	78	98	21
2013	37	68	105	23
Total	**317**	**1,092**	**1,409**	**220**

ENGLAND

ENGLAND

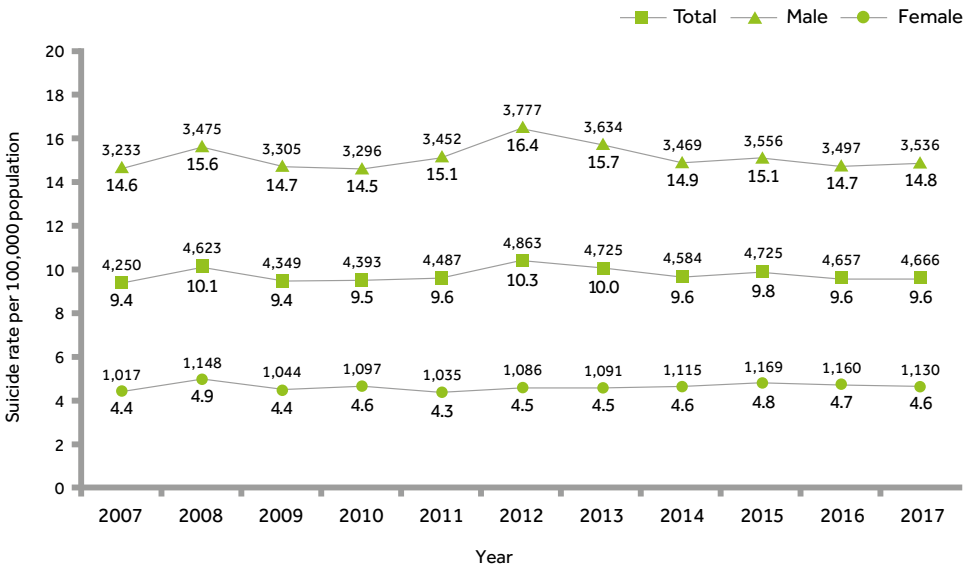
SUICIDE

Between 2007-2017, NCISH was notified of 50,322 deaths in the general population that were registered as suicide or "undetermined", an average of 4,575 per year. These are referred to as suicides throughout the report.

SUICIDE IN THE GENERAL POPULATION

The pattern of suicide since 2007 is (a) a rise in 2008 and 2012, with intervening years being lower, influenced by under-recording of "narrative" conclusions, (b) lower rates since 2012 (Figure 15). Based on recent years, we can expect an approximate 4% increase on this figure, bringing it in line with suicide rates in recent years.

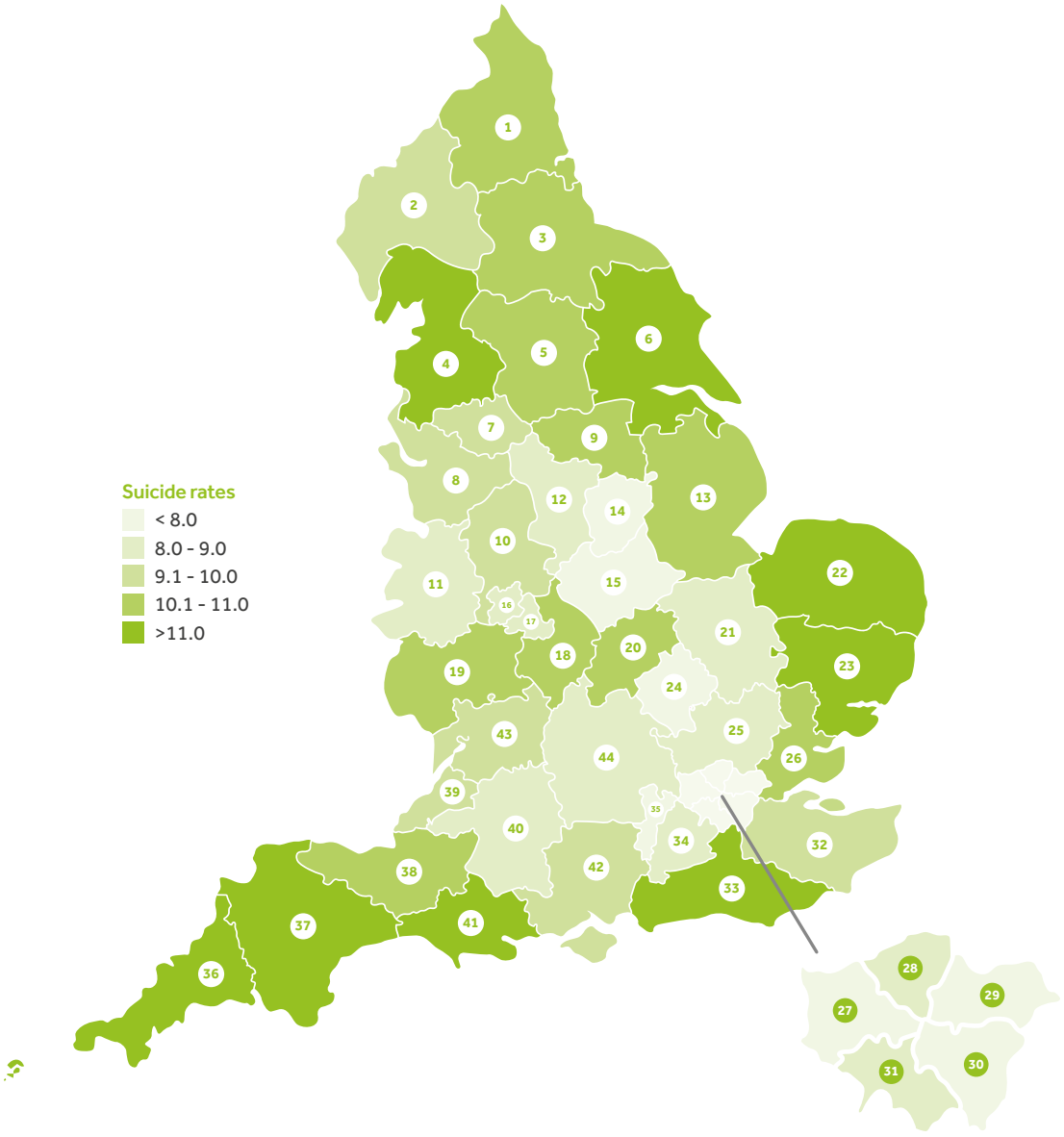
Figure 15: Rates of suicide in the general population in England, by gender. Number of suicides are included on the figure and are shown above the rates



Variation in suicide rates by local health and care systems (Sustainability and Transformation Partnership (STP) 'footprints')

Suicide rates varied across the 44 Sustainability and Transformation Partnership (STP) 'footprints' that were in existence at the time of data collection and analysis. Average rates for 2015-2017 are shown in Figure 16. The highest rate of suicide was in Cornwall and the Isles of Scilly, at 13.4 per 100,000 population, over 80% higher than the lowest rate in Bedfordshire, Luton and Milton Keynes, at 7.2 per 100,000 population. In general the highest rates were in the north and south-west, with the lowest rates in London and the south-central areas. However, there were also high rates in rural coastal areas such as Norfolk and Suffolk.

Figure 16: Rates of suicide per 100,000 population, by STP 'footprint' area of residence (average rate 2015-2017)



Note: for a full list of rates by STP 'footprint' area see supplementary information

Method of suicide

Deaths by hanging/strangulation increased over the report period, deaths from jumping/multiple injuries increased but recently fell, whilst deaths by self-poisoning decreased (Figure 17). Of the less common methods, there was an overall increase in deaths from gas inhalation (Figure 18). There was an increase in deaths by cutting/stabbing between 2007 and 2013, though the reported number has fluctuated since. Firearms remain a minor method, constituting less than 2% of all deaths, with a fall since a small peak in 2009.

Figure 17: Suicide in the general population in England: main causes of death

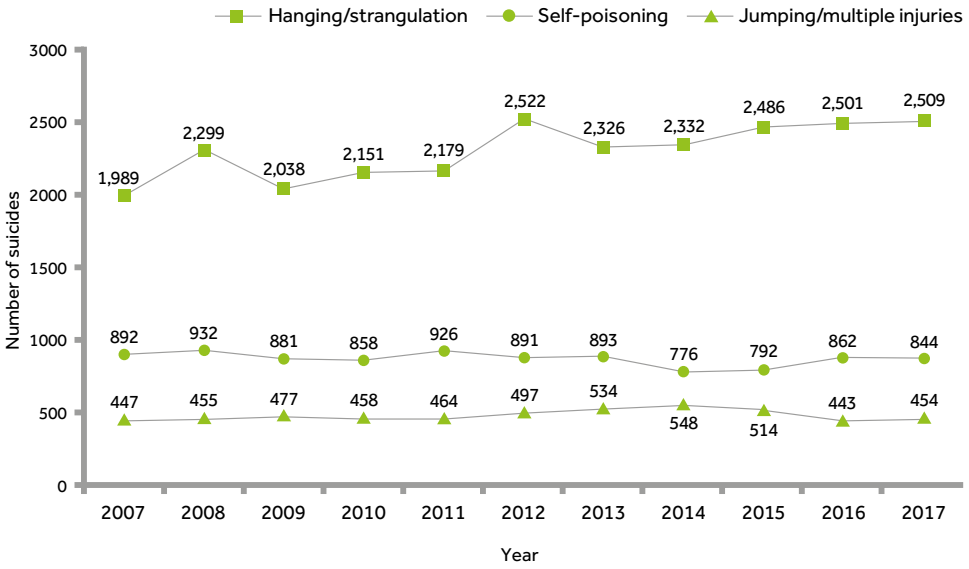
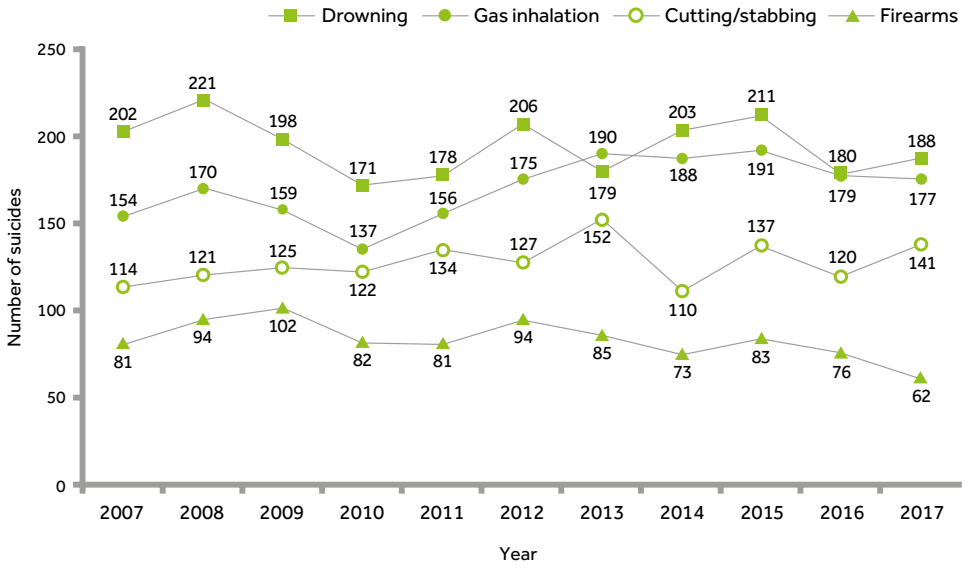


Figure 18: Suicide in the general population in England: other causes of death



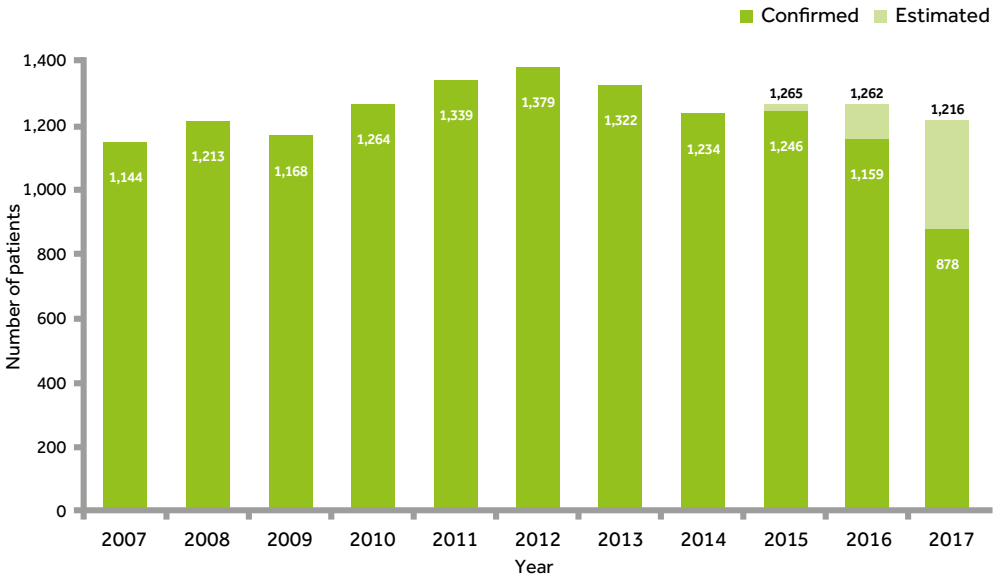
PATIENT SUICIDE

Patient suicide: numbers and rates

During 2007-2017, 13,806 deaths (27% of general population suicides) were identified as patient suicides, i.e. people in contact with mental health services in the 12 months prior to death. This represents an average of 1,255 patient suicides per year. The number increased between 2007 and 2012, fell in 2013 and 2014, and has since remained stable (Figures 19 and 20).

Rates of patient suicide - taking into account the rising number of patients under mental health care[1] show a different pattern (Figure 21). Although rates pre- and post-2011 are not comparable because of changes to methodology,[2] rates fell in both periods, suggesting a fall overall.

Figure 19: Number of patient suicides in England



[1] Mental Health Services Data Set. **https://data.gov.uk/dataset/mental-health-services-monthly-statistics**
[2] Health and Social Care Information Centre (2012). Mental Health Bulletin: Annual report from MHMDS returns – England 2011-12, initial national figures. February, 2012.
https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-bulletin/mental-health-bulletin-annual-report-from-mhmds-returns-england-2011-12-further-analysis-and-organisation-level-data

Figure 20: Number of patient suicides in England, by gender

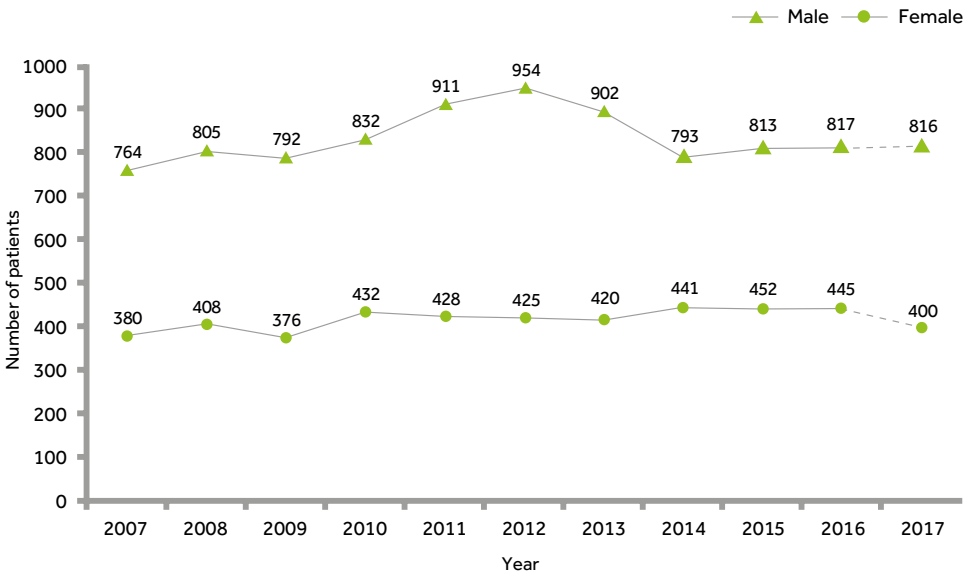
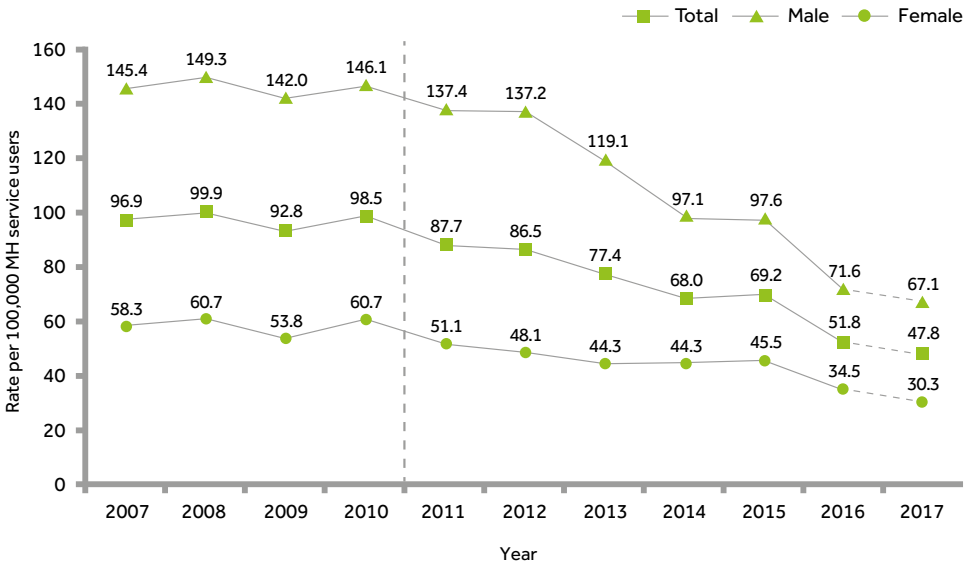


Figure 21: Rates of suicide per 100,000 mental health service users† in England



† The Mental Health Services Data Set (MHSDS)[1] was used to calculate rates. Changes in MHSDS methodology[2] means rates between 2007-2011 and 2011-2017 are not directly comparable. Rates in 2011-2017 are based on 1,517,613 service users in 2011, 1,578,409 in 2012, 1,703,247 in 2013, 1,813,672 in 2014, 1,828,428 in 2015, 2,434,913 in 2016 and 2,542,538 in 2017.

[1] Mental Health Services Data Set. **https://data.gov.uk/dataset/mental-health-services-monthly-statistics**
[2] Health and Social Care Information Centre (2012). Mental Health Bulletin: Annual report from MHMDS returns – England 2011-12, initial national figures. February, 2012.
https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-bulletin/mental-health-bulletin-annual-report-from-mhmds-returns-england-2011-12-further-analysis-and-organisation-level-data

Method of suicide by patients

The most common methods of suicide are shown in Figure 22. Hanging/strangulation increased by 27% during 2007-2016. The increase was especially seen in women, from an average of 33% in 2007-2010 to 41% in 2014-2017.

The number of self-poisoning deaths increased because of a rise in opiate deaths between 2007 and 2011 but has been falling since. Overall, opiates and opioids accounted for a third of deaths by self-poisoning (Table 20), though the number of deaths using opiates and opioids fell by 29% between 2007 and 2016. There was an increase in self-poisonings using paracetamol over the report period. The number of deaths by psychotropic drugs fell by 26% between 2007 and 2016.

Figure 22: Patient suicide in England: main causes of death

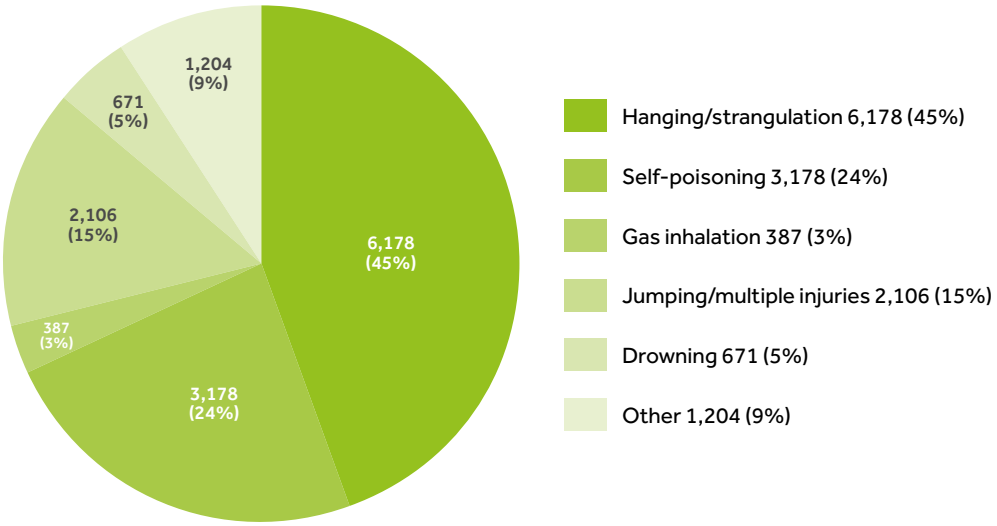


Table 20: Main substances used in deaths by self-poisoning in England (2007-2017)

	Deaths by self-poisoning N=3,178	
Substance	**Number**	**%**
Opiates/opioids - opiates only - paracetamol/opiate compound	**906** **724** **182**	**33** **27** **7**
Non-opiate analgesics	**209**	**8**
Antipsychotics	**296**	**11**
Antidepressants - tricyclics - SSRI/SNRIs - other antidepressants	**556** **242** **261** **53**	**20** **9** **10** **2**
Benzodiazepines/hypnotics	**97**	**4**

We have collected data on the types of opiates used since 2012, the most common being heroin/morphine (134, 41%), codeine (60, 18%) and tramadol (56, 17%). 38 (12%) used methadone. Information on the source of the opiates/opioids was available in 50%. In 49% (excluding unknowns) these had been prescribed for the patient.

Social and clinical characteristics

Tables 21-23 show the main social, clinical and behavioural features of patients dying by suicide. These patients had high rates of social adversity and isolation, e.g. unemployment and living alone. Around half had a co-morbid condition, and rates of previous self-harm and alcohol misuse were high.

Since 2015, we have collected data on whether the contact with services was a one-off contact. This was the case in 251 (13% excluding unknowns) patients in 2015-2017.

In 370 (5%) the suicide had occurred on or near an anniversary or other significant date.

Table 21: Demographic characteristics of patients who died by suicide in England (2007-2017)

Demographic features	Total=13,806	
	Number	%
Age: median (range)	46 (10-100)	
Aged under 25†	1,069	8
Male†	9,199	67
Not currently married	9,116	71
Living alone	6,014	47
Unemployed	5,702	45
On long-term sick leave	1,513	12
Black, Asian & minority ethnic group	1,052	8
Homeless	331	3

† includes estimated figures in 2015-2017

Table 22: Clinical characteristics of patients who died by suicide in England (2007-2017)

Clinical features	Total=13,806	
	Number	%
Any secondary diagnosis	6,720	51
Duration of illness (<12 months)	2,710	22
First contact with mental health services:		
<12 months	3,517	29
>5 years	5,239	43
Last admission was a re-admission	866	13

Table 23: Behavioural characteristics of patients who died by suicide in England (2007-2017)

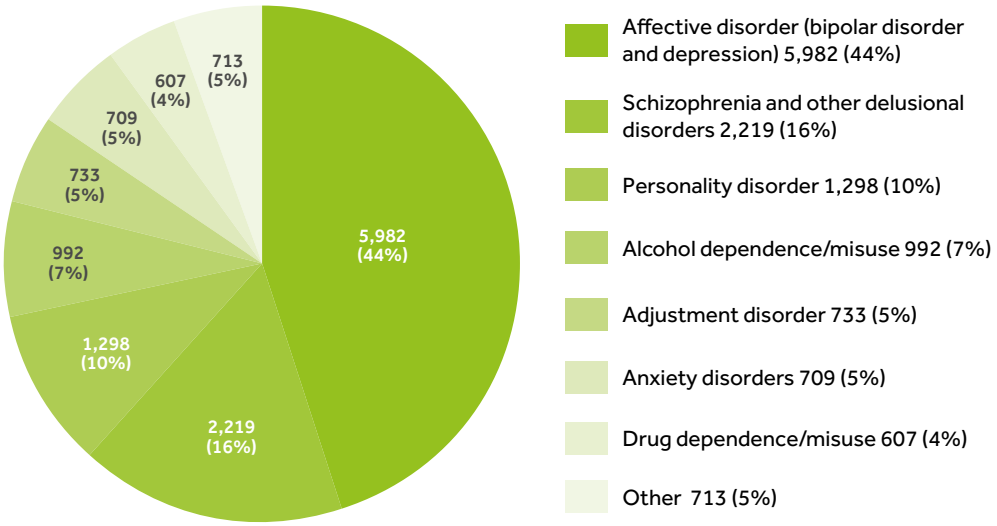
Clinical features	Total=13,806	
	Number	%
History of self-harm	8,404	66
History of violence	2,641	21
History of alcohol misuse†	5,963	45
History of drug misuse†	4,441	34

† includes estimated figures in 2015-2017

Diagnosis

The main primary psychiatric diagnoses are shown in Figure 23. Suicide in patients with affective disorder (bipolar disorder and depression) rose between 2007 and 2012 but has since fallen, with an average of 544 per year during the report period. In patients with schizophrenia and other delusional disorders, the number increased after 2008 to a peak in 2013 and then fell, with an average of 202 per year. In patients with a diagnosis of personality disorder, the number has generally risen since 2007, with an average of 118 per year.

Figure 23: Patient suicide in England: primary psychiatric diagnoses

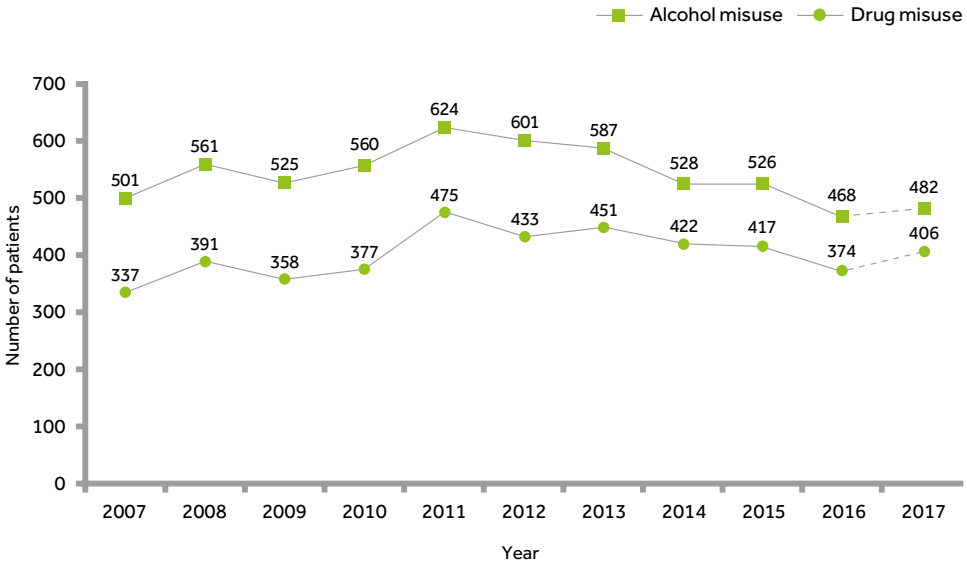


Patients with alcohol and drug misuse

There were an estimated 5,963 (45%) suicides in patients with a history of alcohol misuse, an average of 542 deaths per year; 4,441 (34%) had a history of drug misuse, an average of 404 deaths per year; and 7,248 (54%) had a history of either alcohol or drug misuse or both, an average of 659 deaths per year.

The number of suicides in patients with a history of alcohol or drug misuse has fallen since a peak in 2011 (Figure 24). There was an 18% increase in the number of patients aged under 25 with a history of drug misuse, though the proportion did not change, reflecting the increasing number of deaths in this group. There was no equivalent increase in alcohol misuse in under 25s. Between 2011-2017, 811 (21%) of those with a drug or alcohol problem were under the care of substance misuse services.

Figure 24: Patient suicide in England: number with a history of alcohol or drug misuse



MENTAL HEALTH CARE

Table 24 shows some of the key service-related characteristics, including priority patient groups, recent contact with services, and estimations of risk. Many are in acute care settings (in-patients, under crisis resolution/home treatment (CRHT), recently discharged from in-patient care), and half had been in recent (<7 days) contact with mental health services.

The immediate risk of suicide at the time of final service contact was judged by clinicians to be low or not present for the majority of patients who died by suicide. Our recent report "The assessment of clinical risk in mental health services" examined this 'low-risk paradox'; our recommendation is that risk assessment tools should not be seen as a way of predicting future suicidal behaviour.

Table 24: Service characteristics of patients who died by suicide in England (2007-2017)

Characteristic	Total=13,806	
	Number	%
In-patients†	1,034	7
Recent (<3 months) discharge†	2,178	16
Under crisis resolution/home treatment services†	2,105	16
Missed last contact in previous month	2,810	23
Non-adherence with medication in previous month	1,535	13
Contact with services		
Last contact within 7 days of death	6,411	48
Short-term risk: low or none	9,945	84
Long-term risk: low or none	6,707	58

†includes estimated figures in 2015-2017

In-patient suicide

There were 1,034 in-patient deaths by suicide in 2007-2017, representing 7% of patient suicides, an average of 94 per year. From 2007 to 2017, there was a 40% fall in the number of in-patient suicides (Figure 25), though the number has remained stable in recent years. However, in-patient deaths are more often subject to late notification – up to 4 years. We have therefore estimated the overall figures in 2015-2017 using the average proportion of all patient suicides that were in-patients in recent years. Estimates in previous years have proved to be accurate.

In-patient suicide numbers may be affected by changes in the number of admissions. Nonetheless, we found rates of in-patient suicide per 10,000 admissions still fell by 38% in 2007-2017 (Figure 26). Our figure for 2017 appears to show an important fall, although at this stage this includes a degree of estimation and so should be treated with caution.

Figure 25: Patient suicide in England: number of mental health in-patients; number who died by hanging/strangulation on the ward

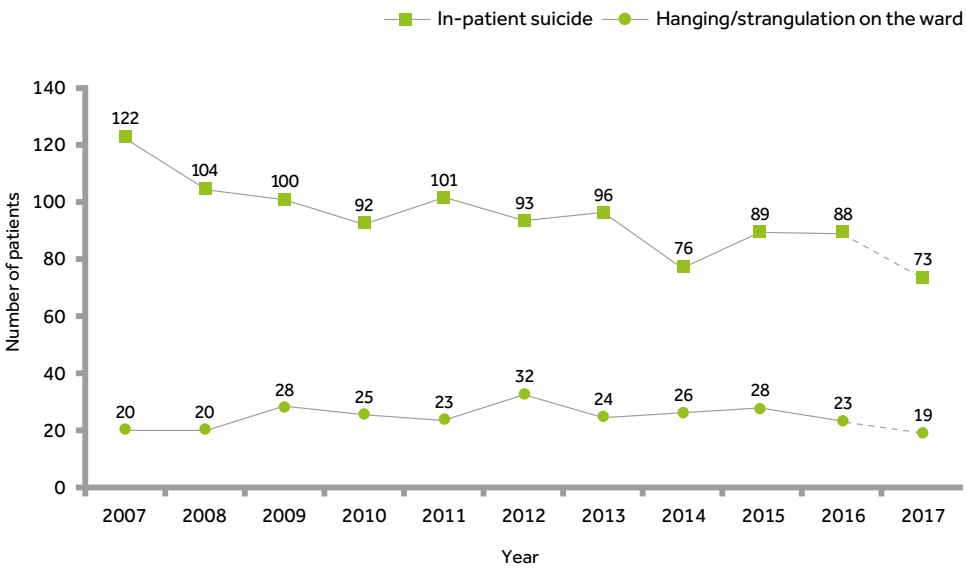
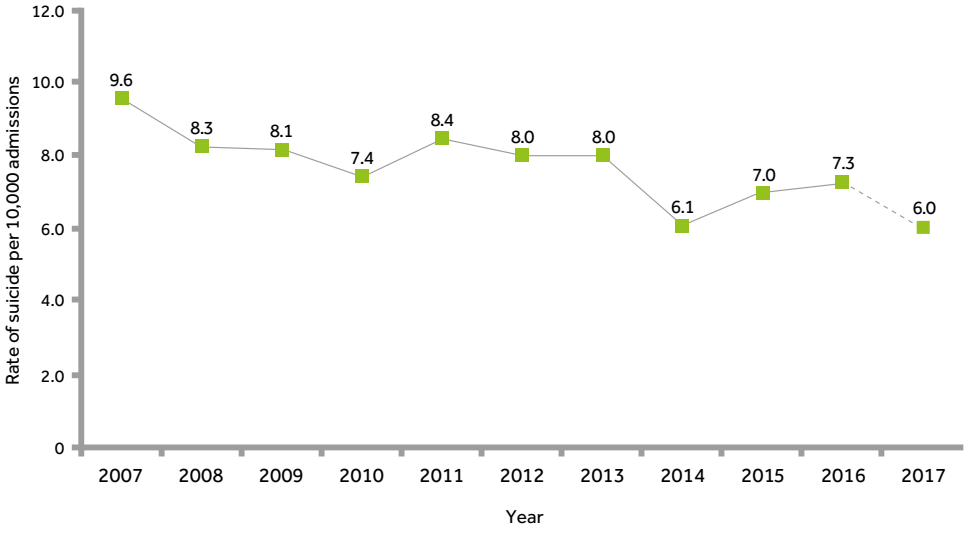


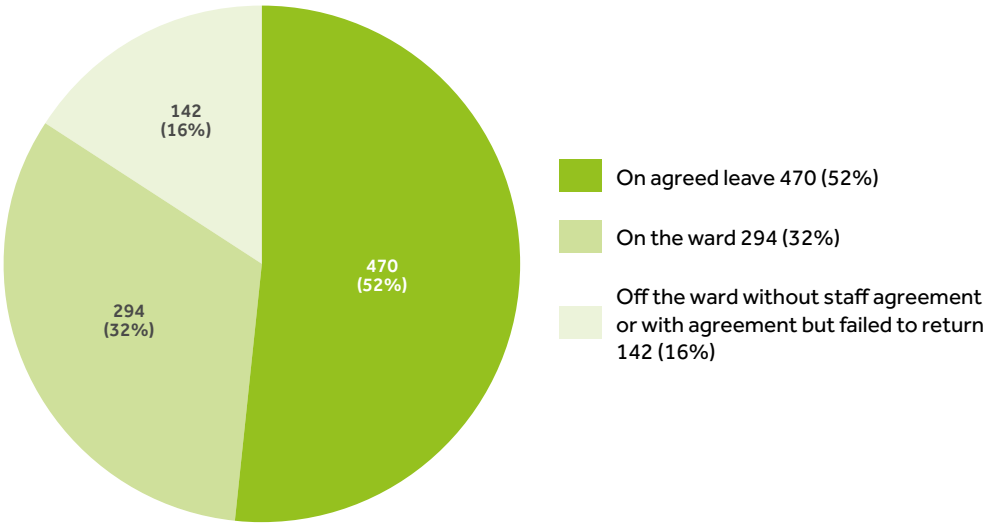
Figure 26: Patient suicide in England: rate of in-patient suicide per 10,000 admissions



The following sections are based on actual figures and do not include estimations for recent years. 115 in-patient suicides (13%) took place in the first week after admission, most often on day 2 (22 patients) or day 7 (19 patients); the lowest number occurred on the day of admission (10 patients).

A third of patients died on the ward itself; over half were on agreed leave or had left with staff agreement; and 16% died after leaving the ward without staff agreement or with staff agreement but failed to return (Figure 27). Patients who died after leaving the ward without staff agreement (or with staff agreement but failed to return) were more likely than other in-patients to be male (105, 74% v. 288, 61%), Black, Asian and minority ethnic (BAME) patients (20, 14% v. 38, 8%), have a history of drug misuse (56, 40% v. 119, 26%), and to have died in the first week of admission (27, 19% v. 25, 5%).

Figure 27: In-patient suicide in England: extent of leave at the time of suicide



There were approximately 20-30 deaths per year by hanging/strangulation on the ward (Figure 25); many are from low-lying ligature points (i.e. strangulation) but also include deaths by strangulation with no ligature point (i.e. self-strangulation). The majority died by hanging/strangulation in a single bedroom (153, 68%) or a toilet/bathroom (53, 23%). The most common ligature points were doors (97, 47%) or windows (27, 13%) and the most common ligatures were a belt (72, 33%) or sheets/towels (58, 27%).

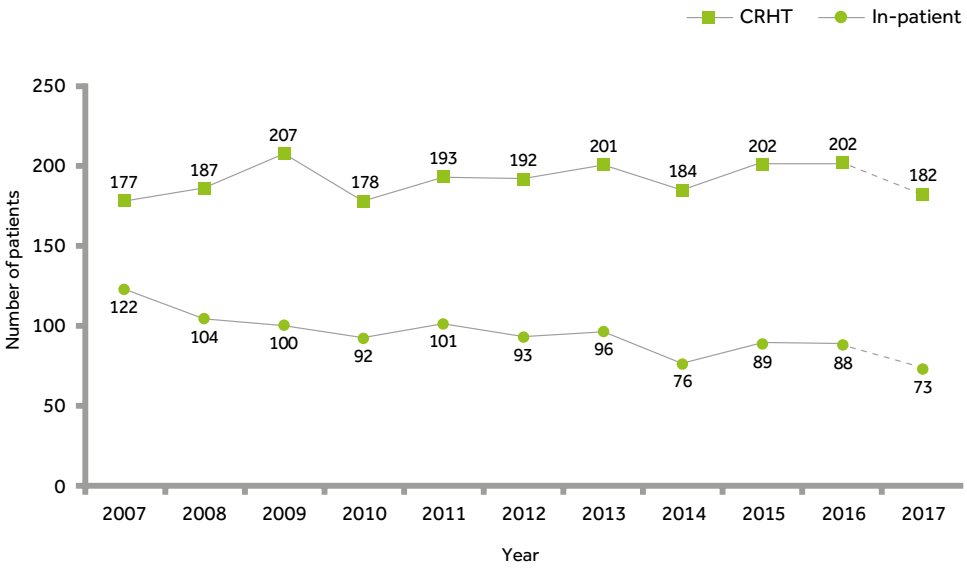
There were 279 suicides in detained in-patients, 30% of in-patient suicides, an average of 25 per year. 166 in-patient suicides were under a medium or high level of observation, an average of 15 deaths per year.

Crisis Resolution/ Home Treatment (CRHT)

There were 2,105 suicides in patients under CRHT teams, 16% of the total sample, an average of 191 deaths per year. The overall figures for 2015-2017 have been estimated to take into account late notifications. Overall, the annual number of suicides under CRHT did not change over the report period (Figure 28). Our recent estimates mean there are now over twice as many patient suicides under CRHT compared to in-patient suicides. This reflects the greater number of patients under CRHT, now the main location where patients with acute illness are seen and the key place where suicide prevention measures can have the greatest impact. CRHT teams are one of our 10 ways to improve safety. The average rate of suicide under CRHT in 2012-2017 (the years when denominator data, i.e. the number of CRHT attendances, were available) was 12.1 per 100,000 attendances; the pattern in rates followed broadly the trend in the number of deaths in recent years.

In 590 (31%) the patient had been discharged from in-patient care in the preceding 3 months; 244 (29%) died within 2 weeks of discharge, 153 (18%) within a week. We have collected data on length of time under CRHT since 2012; 329 (38%) patients who died had been under CRHT services for less than a week.

Figure 28: Patient suicide in England: number under crisis resolution/home treatment services and mental health in-patients



Patients recently discharged from hospital

There were 2,178 suicides within 3 months of discharge from in-patient care, 16% of all patient suicides, an average of 198 deaths per year. The overall figures for 2015-2017 (Figure 29) have been estimated to take into account late notifications. The remaining figures in this section will present the actual figures. The number and rate of post-discharge suicides have fallen since a peak in 2011 (Figure 29). The average rate of suicide was 16.5 per 10,000 discharges.

Post-discharge suicides were most frequent in the first week after leaving hospital when 297 (16%) deaths occurred (Figure 30); the highest number (21%) occurred on the third day. Of the patients who died in the first week after discharge, 50% had experienced recent adverse life events, with serious financial difficulties (28% v. 16%) and family problems (12% v. 5%) significantly more common than other post-discharge patients. We continue to recommend all patients are followed up within 3 days of discharge from in-patient care.

Of all post-discharge suicides, 207 (11%) died before the first follow-up appointment. The number and proportion of patients who died before the first follow-up fell over the report period.

195 (10%) died after being discharged from a non-local in-patient unit. This proportion was higher in those who died within 2 weeks of discharge (66 patients, 13%). In 2017 there were 6 (7%) suicides after discharge from a non-local unit.

Figure 29: Patient suicide in England: number who died within 3 months of in-patient discharge and rate of suicide per 10,000 discharges

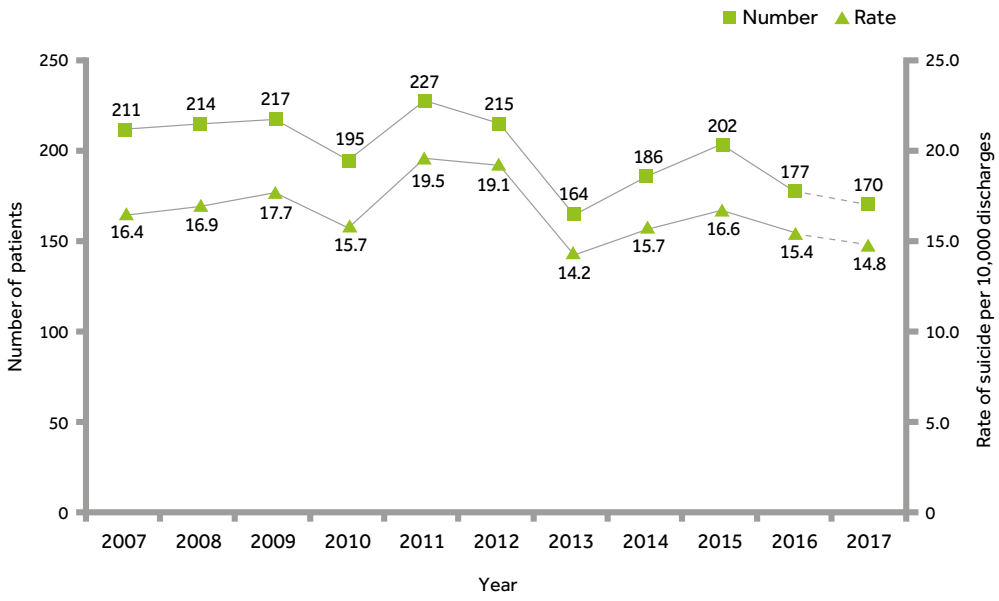
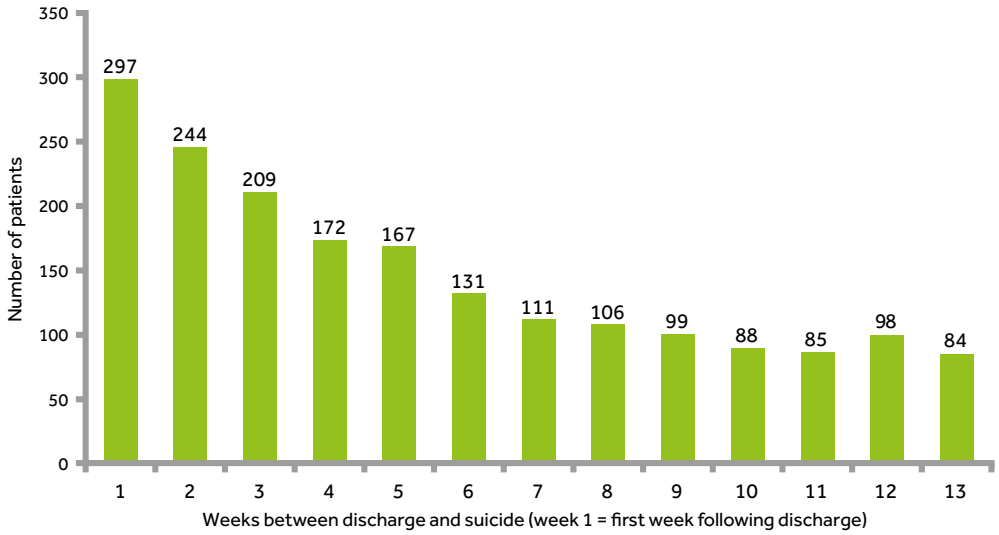


Figure 30: Patient suicide in England: number per week following discharge (2007-2017)



Community Treatment Orders (CTO)

There were 126 patients who died by suicide having been subject to a CTO in 2009-2017, 1% of all patient suicides in this time period, an average of 14 per year. A third (43, 34%) were no longer under CTO at the time of suicide. The rate of suicide in patients ever subject to a CTO was 32.1 per 10,000 CTOs issued in 2009-2017. The number or rate did not change overall between 2009-2017.

28 (34%) of the 83 deaths under CTO at the time of suicide occurred within 3 months of hospital discharge. 28 (34%) were non-adherent with drug treatment or had missed their final service contact, despite CTO powers.

Section 136

In 2012-2017, there were 257 patients who had been conveyed to a hospital (n=223) or custody (n=67) based place of safety under Section 136 of the Mental Health Act (MHA) in the 3 months prior to suicide. This represents 4% of all suicides in this time period, an average of 43 per year. Compared to other patients who died, those under Section 136 were more likely to have a primary diagnosis of personality disorder (19% v. 10%) and to have any secondary diagnosis (63% v. 52%).

Improving Access to Psychological Therapies (IAPT)

There were 271 suicides in patients who, at the time of death, were under IAPT services in specialist mental health trusts in the years 2011-2017, 3% of all patient suicides in this time period, an average of 39 per year. The number increased over this time period, as did the rate of suicide, i.e. taking into account the number of attendances under these services.

The majority had affective disorder (bipolar disorder and depression) (57%), anxiety disorders (16%) or adjustment disorders (11%). Around half (51%) had a secondary diagnosis, similar to other patients. More patients under IAPT services had a recent onset of illness (42% v. 22%). In 65% the long-term risk of suicide was viewed as low/no risk, higher than for other patients (58%).

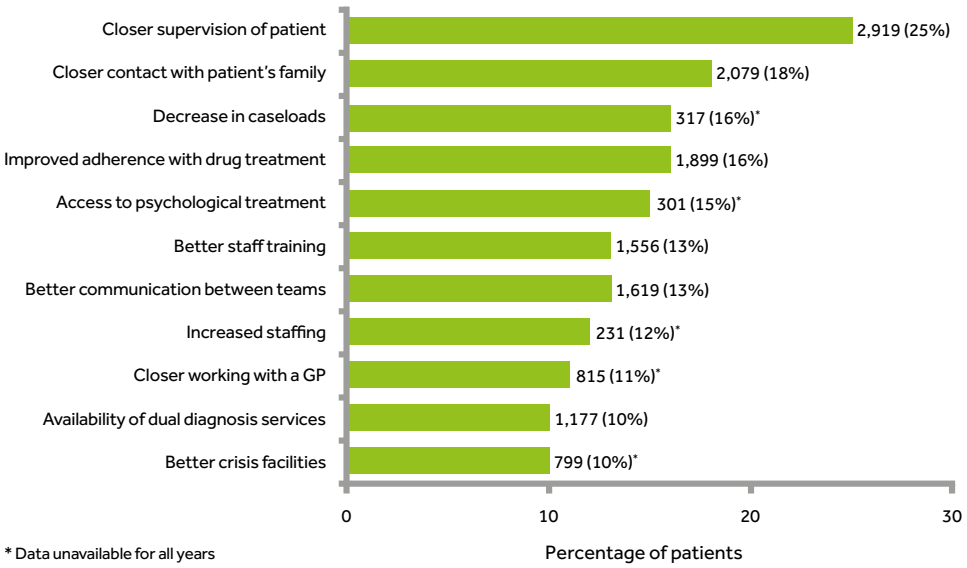
Child and adolescent mental health services (CAMHS)

There were 386 suicides by patients aged under 25 who had been under the care of CAMHS as a child/minor in 2007-2017, 44% of all young patients under 25, an average of 35 per year. There was no change over the report period. 217 (57%) were male. Compared to other patients aged under 25, those under CAMHS more often had a primary diagnosis of personality disorder (23% v.11%) and less often had a diagnosis of schizophrenia and other delusional disorders (13% v. 27%).

What could have reduced risk?

We asked clinicians, in their opinion, what factors may have made suicide less likely at the time. The most common factors were: closer supervision of the patient, closer contact with the patient's family, a decrease in caseloads, and improved adherence with treatment (Figure 31). There was an increase in the proportion reporting closer contact with the patient's family, better staff training, better communication between teams, and availability of dual diagnosis services. The proportion reporting improved adherence with medication has decreased.

Figure 31: Patient suicide in England: factors that may have reduced risk



* Data unavailable for all years

HOMICIDE

In 2007-2017, NCISH was notified of 5,368 homicide convictions, an average of 488 per year. There were 5,598 victims, an average of 509 per year.

HOMICIDE FOLLOWED BY SUICIDE

Homicide followed by suicide is defined here as when the offender dies by suicide within 3 days of committing homicide. As there is no conviction for homicide in these cases, they are not included in the homicide analysis.

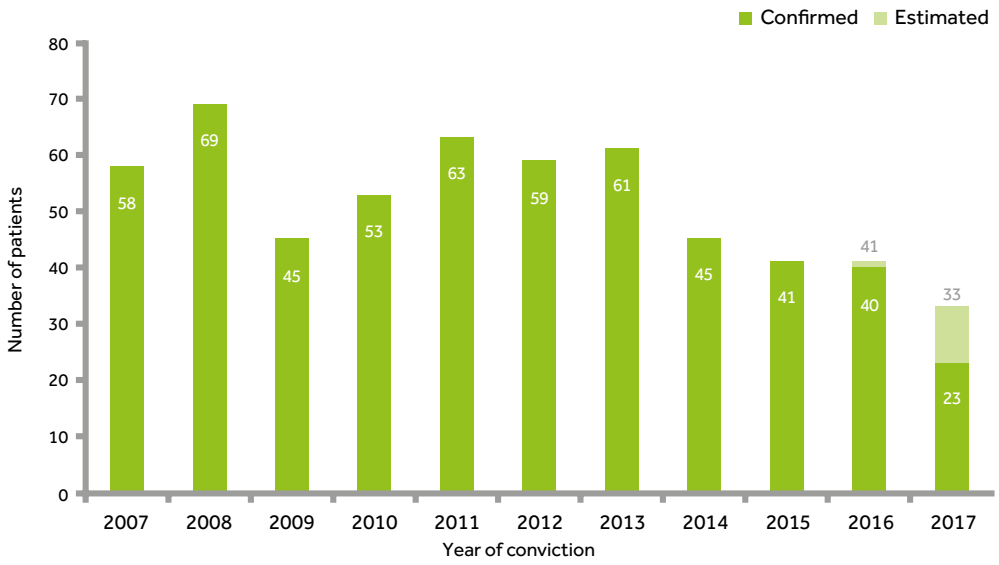
We were notified of 178 homicide-suicide incidents between 2007 and 2017, an average of 16 per year. Most offenders were male (157, 88%) and their median age was 46 (range 16-93). There were 249 victims in total, of which 73% were female.

The relationship of victim to offender (principal victim if there was more than one victim) was most commonly spouse/partner (current/ex) (119, 67%), followed by son/daughter (30, 17%) or acquaintance (12, 7%). Most of the victims who were a spouse/partner were female (97%). 15 (8%) of the homicide-suicides were identified as patients.

PATIENT HOMICIDE

The total number of patient homicides, i.e. people in contact with mental health services in the 12 months prior to the offence, is based on 557 confirmed convictions of patients for a homicide offence during 2007-2017, plus an estimated 11 additional patients for 2016-17 based on the rate of return of homicide data in previous years. This gives a total figure of 568 (Figure 32), an average of 52 homicides per year. There were 593 victims, an average of 54 per year.

Figure 32: Number of patient homicides



NORTHERN IRELAND

NORTHERN IRELAND

SUICIDE

Between 2007-2017, NCISH was notified of 3,050 deaths in the general population that were registered as suicide or "undetermined", an average of 277 per year. These are referred to here as suicides.

SUICIDE IN THE GENERAL POPULATION

There was no overall change in the number or rate of suicides in 2007-2016 (Figures 33 and 34). Some deaths are not registered for several months or longer which means that our figures for the most recent years underestimate the final figures.

Figure 33: Number of suicides in the general population in Northern Ireland, by gender

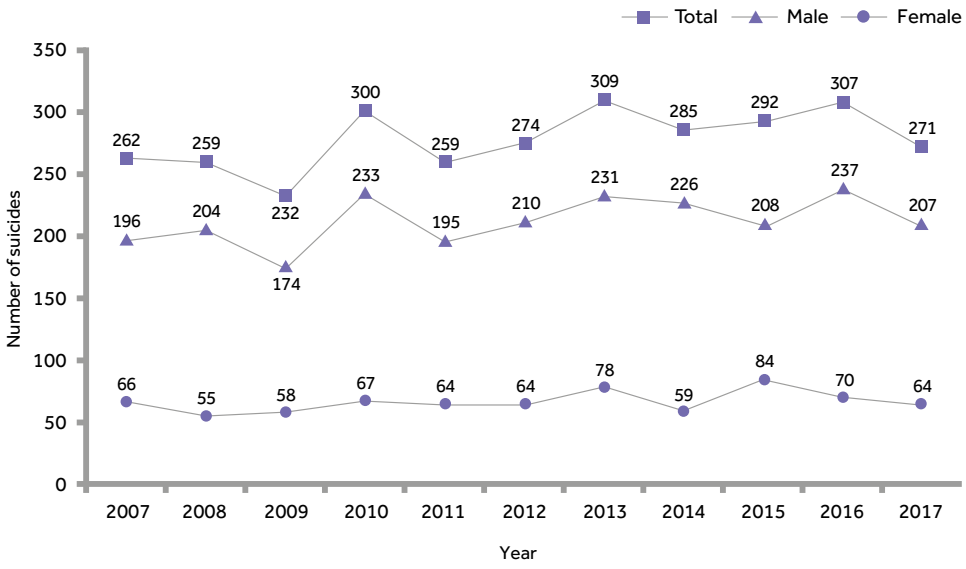
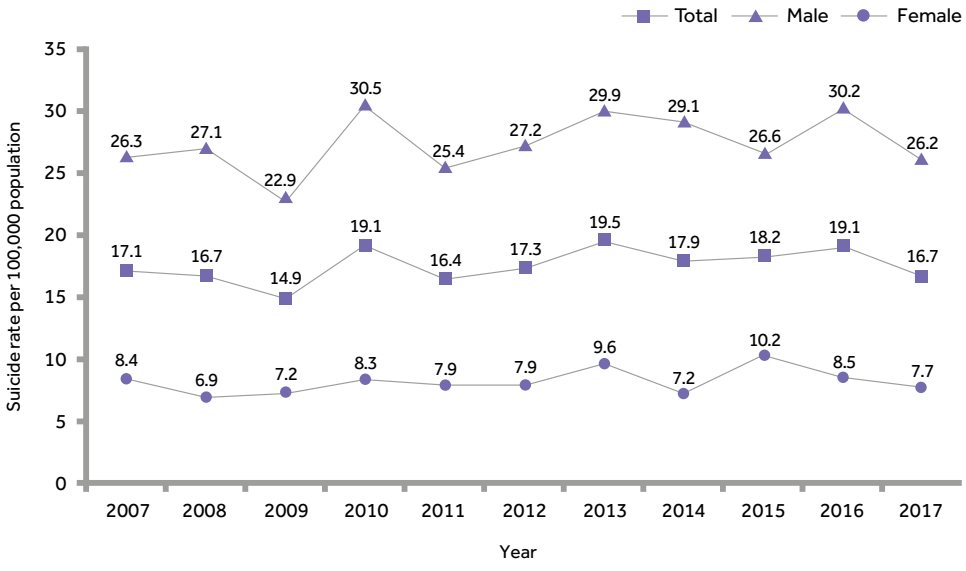


Figure 34: Rates of suicide in the general population in Northern Ireland, by gender

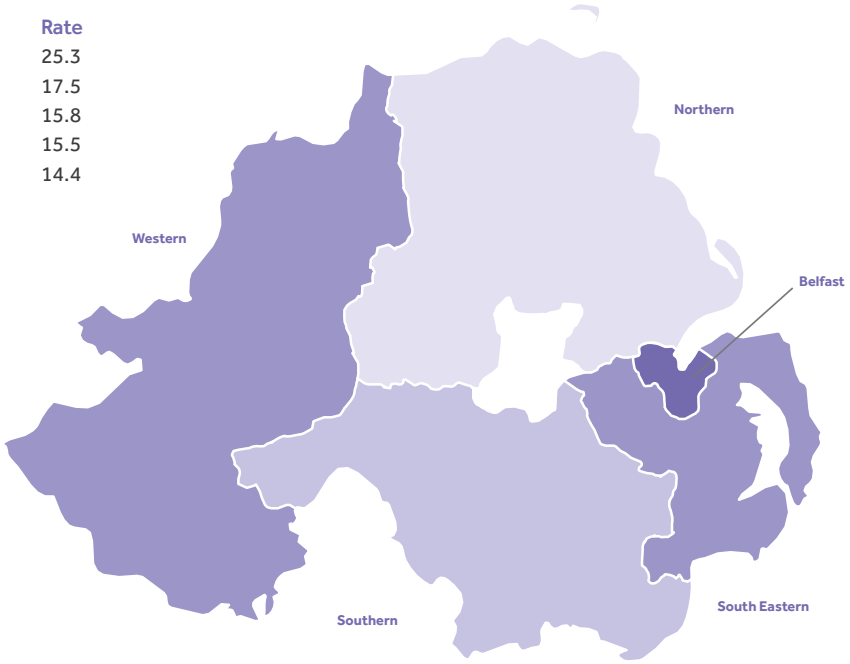


Variation in suicide rates by area of residence

There were variations by area of residence (by Health and Social Care Trust) at the time of death (average rate 2015-2017). The highest rate of suicide was in Belfast at 25.3 per 100,000 population, and the lowest in the Southern Area, at 14.4 per 100,000 population (Figure 35).

Figure 35: Rates of suicide per 100,000 population, by Health and Social Care Trust of residence (2015-2017)

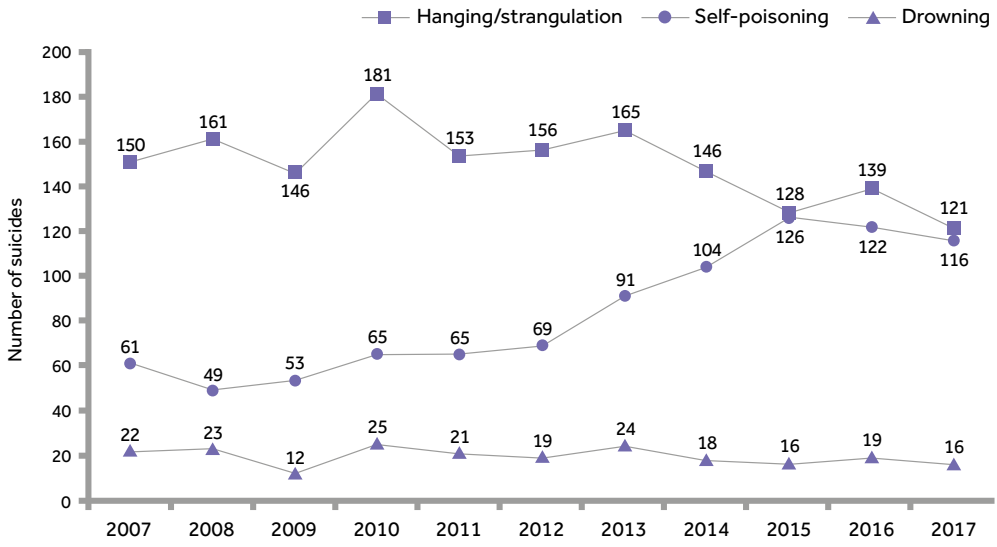
Area	Rate
Belfast	25.3
Western	17.5
Northern	15.8
South Eastern	15.5
Southern	14.4



Method of suicide

Deaths by hanging/strangulation have been falling since a peak in 2010 (Figure 36). Deaths by self-poisoning increased sharply since 2012 and reached a peak in 2015. Some of this increase is accounted for by an increase in opiate deaths. There was no change in the number of deaths by other methods over the report period.

Figure 36: Suicide in the general population in Northern Ireland: main causes of death



SCOTLAND

SCOTLAND

SUICIDE

In 2007-2017, NCISH was notified of 8,542 deaths in the general population that were registered as suicide or "undetermined", an average of 777 per year. These are referred to here as suicides.

SUICIDE IN THE GENERAL POPULATION

There has generally been a sustained fall in the number and rate of suicide since 2011 (Figures 37 and 38).

Figure 37: Number of suicides in the general population in Scotland, by gender

Note: the dotted line indicates when a change in death coding rules occurred, increasing the eligibility of deaths to be recorded as suicide subsequently.
Scotland have published higher rates for 2018 and these are being followed by NCISH for future report.

Figure 38: Rates of suicide in the general population in Scotland, by gender

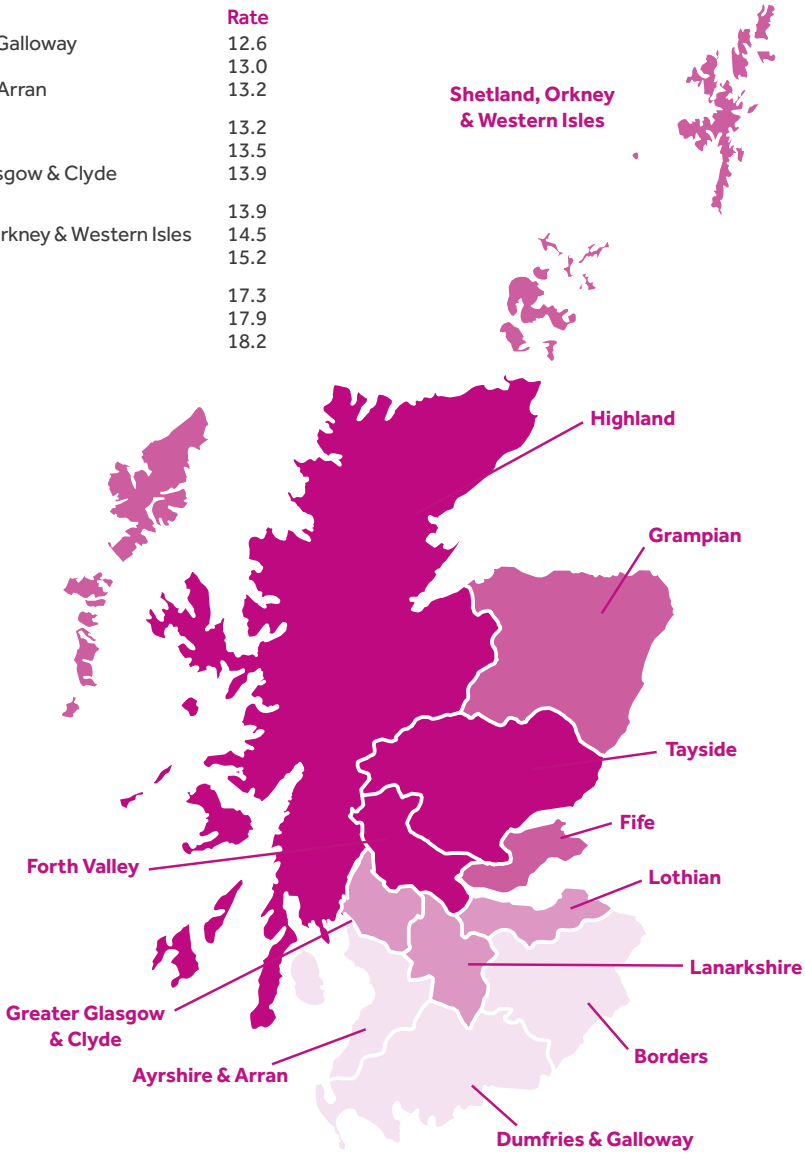
Note: the dotted line indicates when a change in death coding rules occurred.

Variation in suicide rates by area of residence

Suicide rates varied by area of residence (by NHS Health Board) at the time of death (average rate 2015-2017). The highest rate of suicide was in Forth Valley, at 18.2 per 100,000 population, and the lowest rate was in Dumfries and Galloway, at 12.6 per 100,000 population (Figure 39).

Figure 39: Rates of suicide per 100,000 population, by NHS Health Board of residence (average rate 2015-2017)

Area	Rate
Dumfries & Galloway	12.6
Borders	13.0
Ayreshire & Arran	13.2
Lanarkshire	13.2
Lothian	13.5
Greater Glasgow & Clyde	13.9
Fife	13.9
Shetlands, Orkney & Western Isles	14.5
Grampian	15.2
Tayside	17.3
Highland	17.9
Forth Valley	18.2

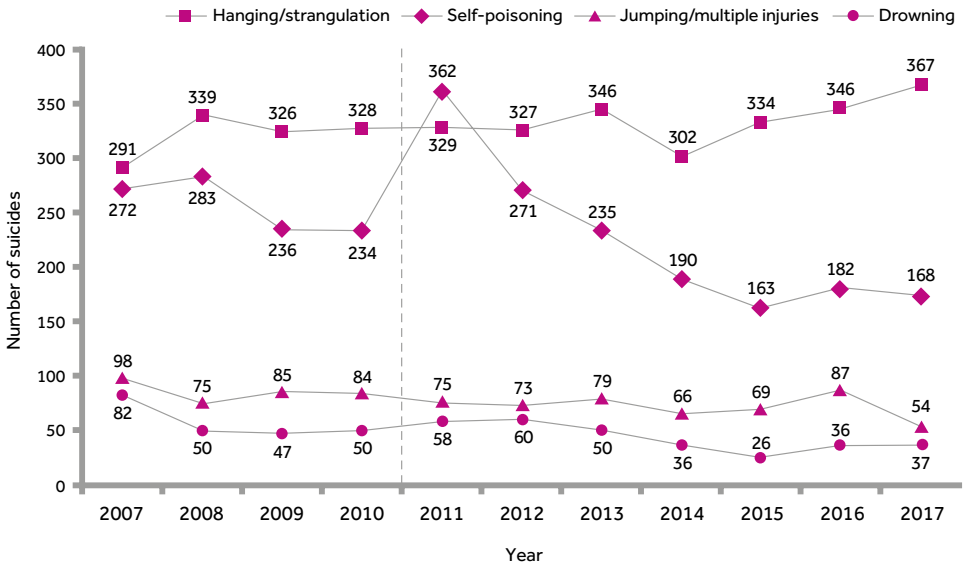


Note: rates have been colour coded to approximate quartile

Method of suicide

The main suicide methods are shown in Figure 40. Deaths by hanging/strangulation increased in 2008 but the recent rise in the number is not statistically significant, though the 2017 figure is the highest in the report period. The apparent increase in suicides by self-poisoning in 2011-2012 is the result of a death coding rule change in 2011, but the number has since fallen. Deaths by drowning decreased by 55% between 2007 and 2017 (Figure 40). Less common methods were gas inhalation (3%), cutting/stabbing (2%) and firearms (1%). There has been no overall change in the number of deaths by these methods.

Figure 40: Suicide in the general population in Scotland: main causes of death



Note: the dotted line indicates when the change in death coding rules occurred.

PATIENT SUICIDE

Patient suicide: numbers and rates

During 2007-2017, 2,685 suicides (31% of general population suicides) were identified as patient suicides, i.e. people in contact with mental health services in the 12 months prior to death. This represents an average of 244 patient suicides per year.

The increase in suicide figures for the general population resulting from a death coding change in 2011 is also reflected in the figures for patient suicides (Figures 41-42). There was a fall in patient suicides after 2011, especially in men, but with little change in 2014-2017 (Figures 41-42).

Figure 41: Number of patient suicides in Scotland

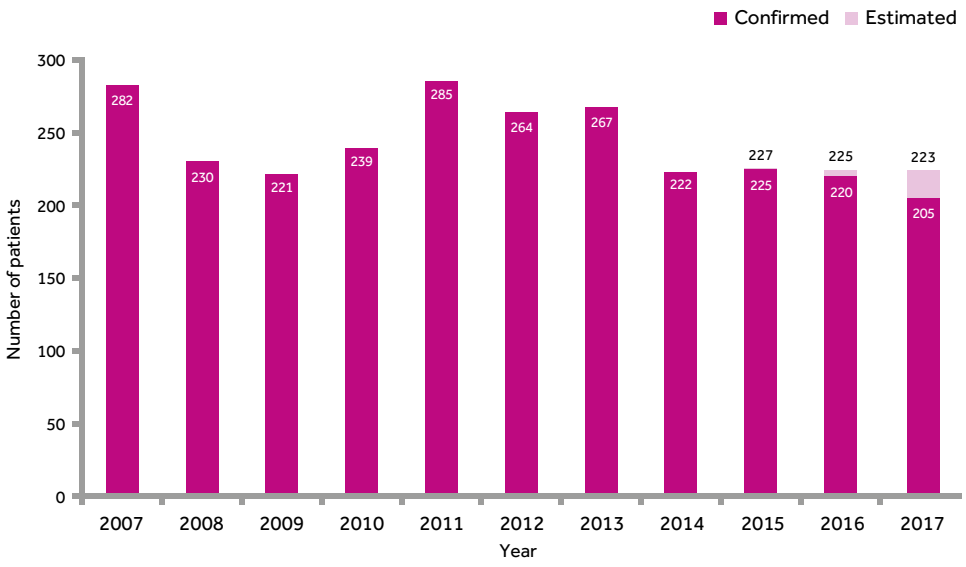
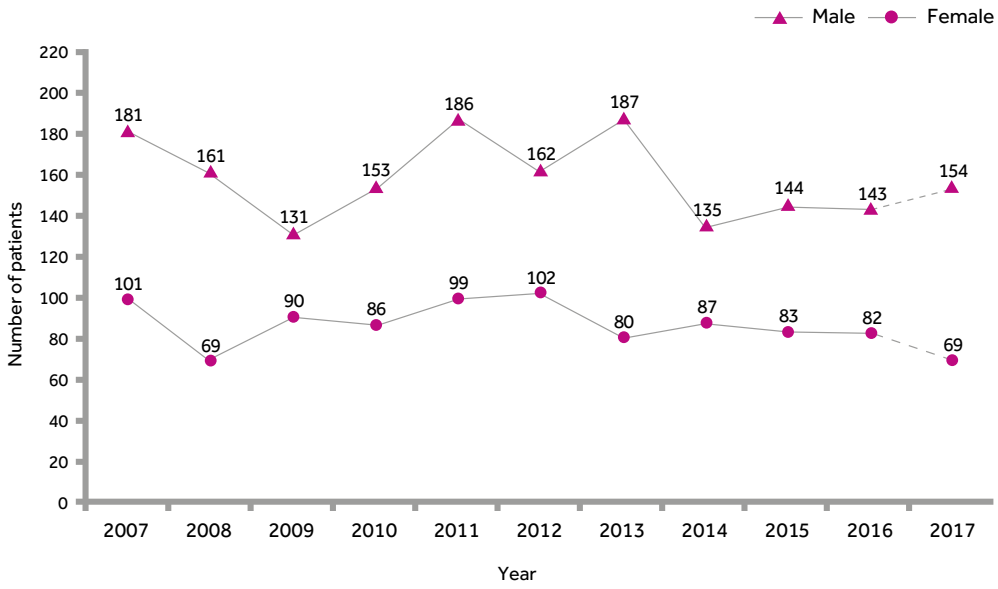


Figure 42: Number of patient suicides in Scotland, by gender



Method of suicide by patients

The percentage of deaths by hanging/strangulation in Scotland was lower than in the rest of the UK whilst for self-poisoning the percentage was higher (Figure 43). The number of deaths by hanging/strangulation has fluctuated over the report period though there has been an increase since 2011. Since a peak in 2011 in suicides by self-poisoning – reflecting the change in coding rules, the numbers have fallen substantially.

Opiates and opioids accounted for almost half (48%) of all drugs used in self-poisoning (Table 25), significantly higher than the rest of the UK (34%). Non-opiate analgesics were used in 7%, with the majority (49, 6% of all self-poisonings) by paracetamol. Antipsychotic drugs were used in 11% and antidepressants (typically tricyclics or SSRI/SNRIs) in 13%.

Figure 43: Patient suicide in Scotland v. rest of the UK: main causes of death

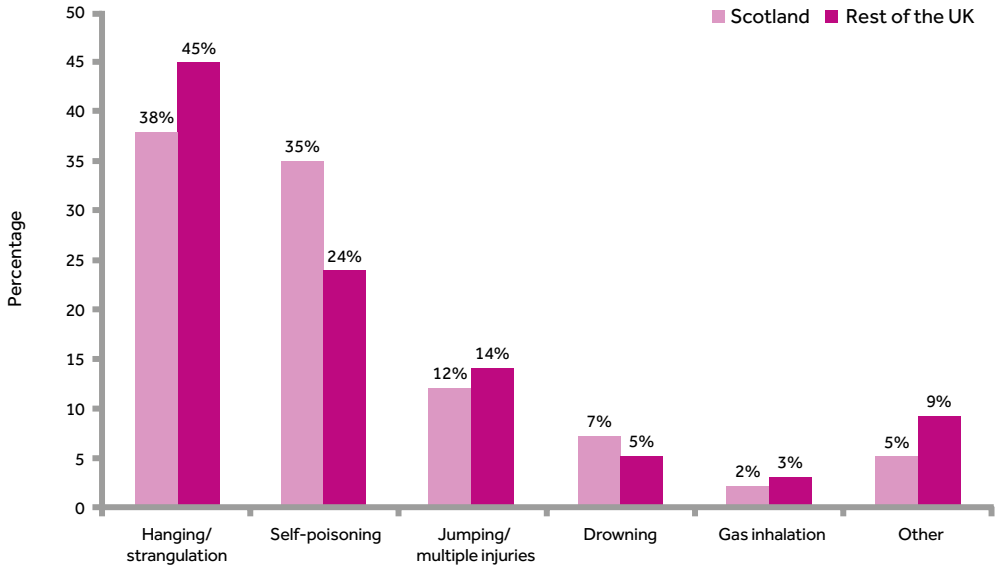


Table 25: Main substances used in deaths by self-poisoning in Scotland

	Deaths by self-poisoning N=934	
Substance	**Number**	**%**
Opiates/opioids - opiates only - paracetamol/opiate compound	**406** **345** **61**	**48** **41** **7**
Non-opiate analgesics	**60**	**7**
Antipsychotics	**91**	**11**
Antidepressants - tricyclics - SSRI/SNRIs - other antidepressants	**111** **59** **43** **9**	**13** **7** **5** **1**
Benzodiazepines/hypnotics	**35**	**4**

We have collected data on the types of opiates used since 2012, the most common being heroin/morphine (44, 34%) followed by methadone (25, 19%) and codeine (24, 18%). Information on the source of the opiates/opioids was available in 49%. In 39% (excluding unknowns) these had been prescribed for the patient.

There has been a decrease in suicide by antipsychotics and antidepressants over the report period. Self-poisonings using paracetamol or other analgesics have remained stable. The number of deaths by psychotropic drugs fell by 69% between 2007-2016.

Social and clinical characteristics

Tables 26-28 show the main social, clinical and behavioural characteristics of patients dying by suicide. A high proportion showed evidence of social adversity and isolation, e.g. unemployment and living alone, compared to the rest of the UK. Over half had a co-morbid condition, and rates of previous violence, alcohol and drug misuse were higher compared to the rest of the UK. 14% had been ill for less than a year, lower than the rest of the UK (22%).

In 60 (5%) the suicide had occurred on or near an anniversary or other significant date.

Table 26: Demographic characteristics of patients who died by suicide in Scotland (2007-2017)

Demographic features	Total=2,685	
	Number	%
Age: median (range)	43 (11-94)	▼
Aged under 25†	217	8
Male†	1,737	65
Not currently married	1,944	77 ▲
Living alone	1,386	55 ▲
Unemployed	1,325	53 ▲
On long-term sick leave	367	15 ▲
Black, Asian & minority ethnic group	43	2 ▼
Homeless	68	3

† includes estimated figures in 2015-2017
▲▼ = significantly (p<0.01) higher or lower than the rest of the UK; see supplementary information for comparative percentages

Table 27: Clinical characteristics of patients who died by suicide in Scotland (2007-2017)

Clinical features	Total=2,685	
	Number	%
Any secondary diagnosis	1,360	52
Duration of illness (<12 months)	337	14 ▼
First contact with mental health services:		
<12 months	479	20 ▼
>5 years	1,438	59 ▲
Last admission was a re-admission	197	14

▲▼ = significantly (p<0.01) higher or lower than the rest of the UK; see supplementary information for comparative percentages

Table 28: Behavioural characteristics of patients who died by suicide in Scotland (2007-2017)

Behavioural features	Total=2,685	
	Number	%
History of self-harm	1,710	67
History of violence	624	25 ▲
History of alcohol misuse†	1,472	57 ▲
History of drug misuse†	1,221	47 ▲

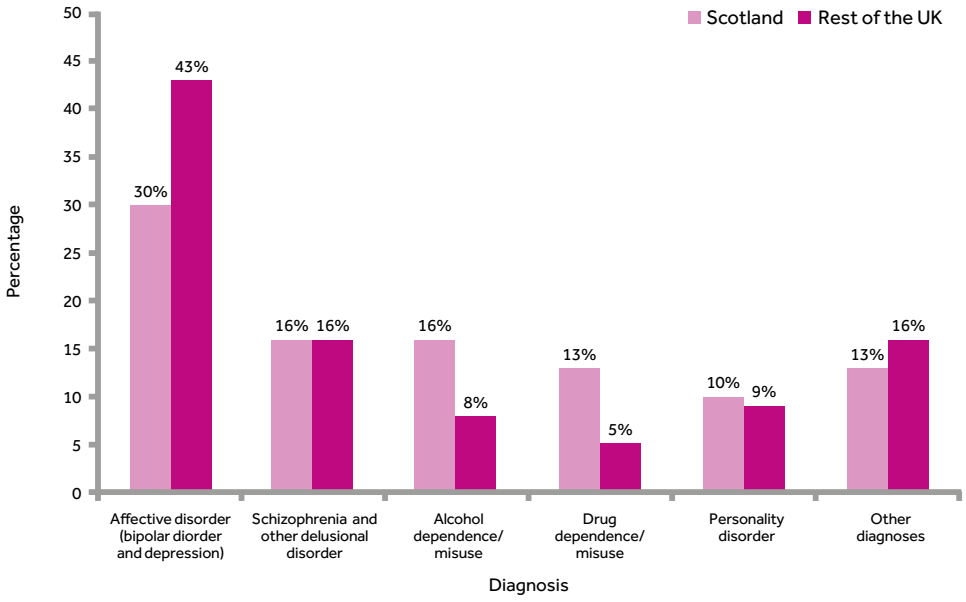
† includes estimated figures in 2015-2017

▲▼ = significantly (p<0.01) higher or lower than the rest of the UK; see supplementary information for comparative percentages

Diagnosis

A higher proportion of patients in Scotland had alcohol and drug dependence/misuse and a lower proportion had affective disorder (bipolar disorder and depression) compared with the rest of the UK (Figure 44). Of the 'other' diagnoses, 5% had anxiety disorder and 4% adjustment disorder. There was an overall fall in the number of patients with alcohol dependence/misuse over the report period.

Figure 44: Patient suicide in Scotland v. rest of the UK: primary diagnosis

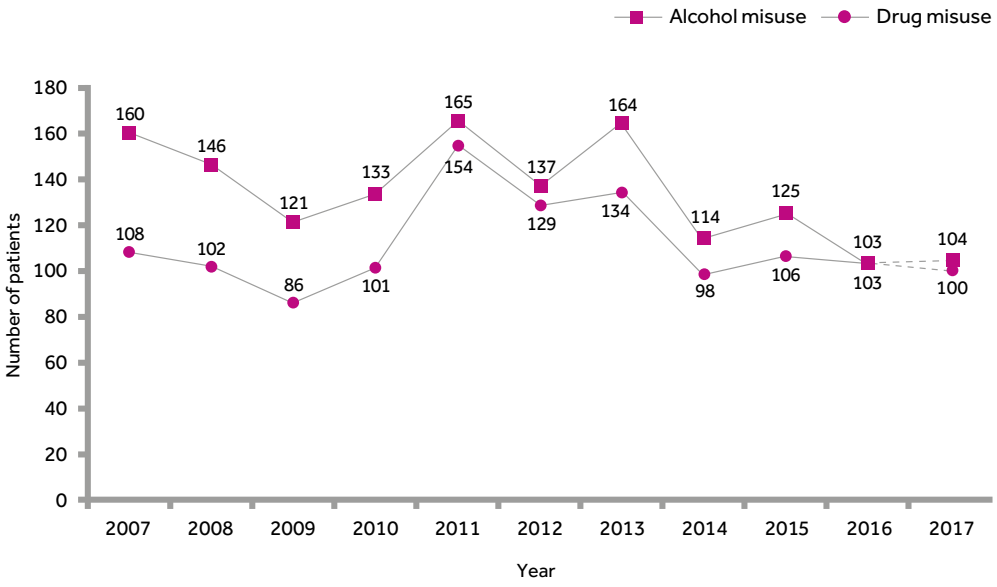


Patients with alcohol and drug misuse

There were an estimated 1,472 (57%) patients with a history of alcohol misuse, an average of 134 deaths per year; 1,221 (47%) had a history of drug misuse, an average of 111 deaths per year; and 1,820 (69%) had a history of either alcohol or drug misuse or both, an average of 165 deaths per year.

The apparent rise in 2011 in the number with a history of alcohol or drug misuse is the result of the change in coding rules, though numbers have fallen since (Figure 45). Between 2012-2017, 298 (35%) of those with a drug or alcohol problem were under the care of substance misuse services.

Figure 45: Patient suicide in Scotland: number with a history of alcohol or drug misuse



MENTAL HEALTH CARE

Table 29 and Figure 46 show some of the key service-related characteristics, including priority patient groups, recent contact with services, and estimations of risk.

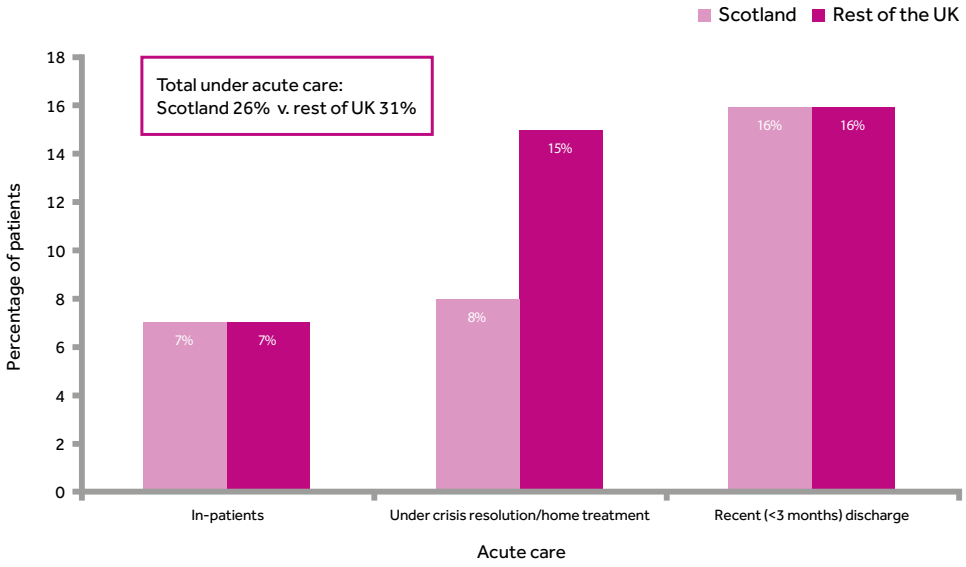
Table 29: Service characteristics of patients who died by suicide in Scotland (2007-2017)

Characteristic	Total=2,685	
	Number	%
In-patient†	179	7
Recent (<3 months) discharge	390	16
Under crisis resolution/home treatment services	188	8 ▼
Missed last contact in previous month	686	28 ▲
Non-adherence with medication in previous month	266	12
Contact with services		
Last contact within 7 days of death	1,009	38 ▼
Short-term risk: low or none	2,131	88 ▲
Long-term risk: low or none	1,419	60

† includes estimated figures in 2015-2017

▲▼ = significantly ($p<0.01$) higher or lower than the rest of the UK; see supplementary information for comparative percentages

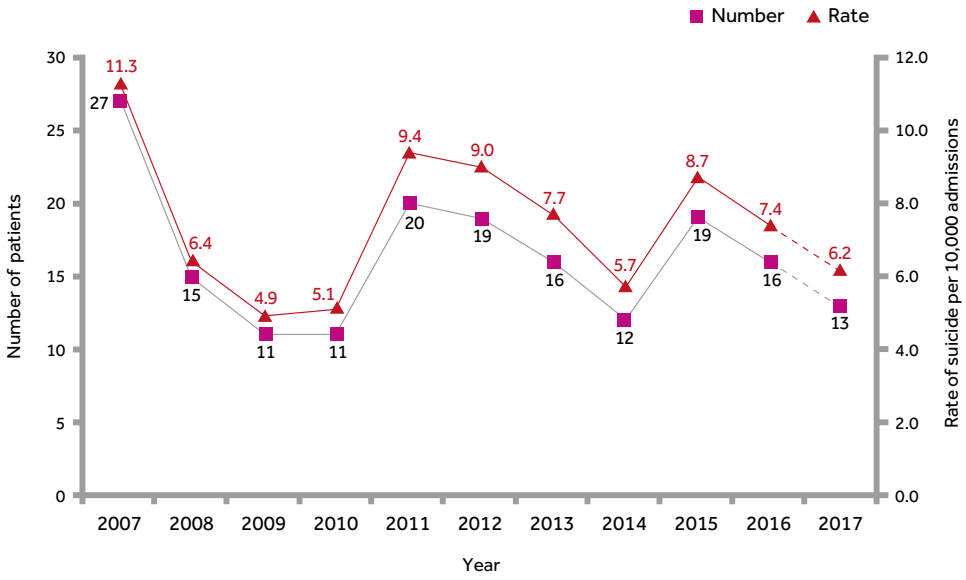
Figure 46: Patient suicide in Scotland v. rest of the UK: percentage under acute care



In-patient suicide

There were 179 in-patient suicide deaths between 2007-2017, 7% of patient suicides, an average of 16 deaths per year. This proportion was similar to the rest of the UK (Figure 46). The rate of in-patient suicide has averaged at 7.5 per 10,000 admissions with fluctuations (Figure 47).

Figure 47: Patient suicide in Scotland: number of mental health in-patients and rate of suicide per 10,000 admissions



52 (31%) patients died on the ward itself; 71 (43%) were on agreed leave or had left with staff agreement; and 44 (26%) died after leaving the ward without staff agreement or with staff agreement but failed to return.

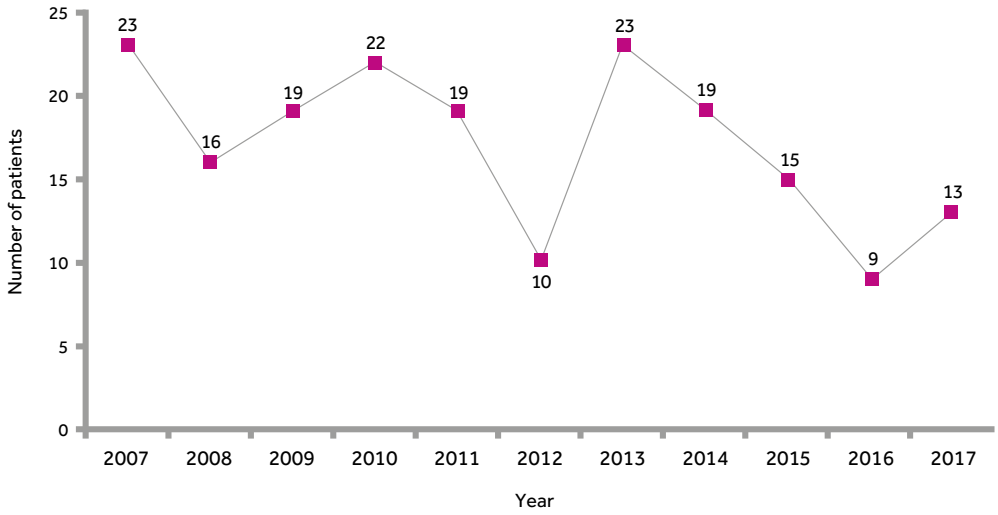
33 suicides (20%) occurred in the first week after admission; the proportion who died in this first week increased over the report period, from an average of 12% between 2007-2011 to 28% between 2012-2016. Within this first week, the highest number occurred on the first day of admission (9 patients).

Crisis Resolution/ Home Treatment (CRHT)

There were 188 suicides in patients under CRHT teams, 8% of the total sample, an average of 17 deaths per year. This proportion was lower than the rest of the UK (Figure 46). The number has fluctuated with no overall change since 2007 (Figure 48). In the last 5 years there have been around the same number of suicides in patients under CRHT (79 patients) as those in in-patient care (76 patients).

Around one-third of patients had been discharged from in-patient care in the preceding 3 months (57, 31%); 22 (22%) died within 2 weeks of discharge, 12 (12%) within a week. We have collected data on length of time under CRHT since 2012; 27 (42%) patients who died had been under CRHT services for less than a week.

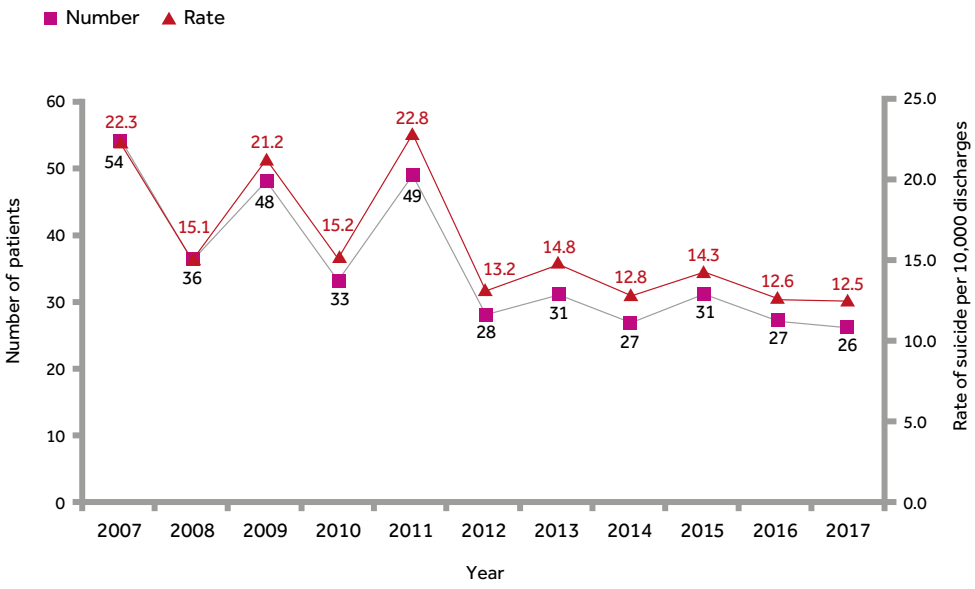
Figure 48: Patient suicide in Scotland: number under crisis resolution/home treatment services



Patients recently discharged from hospital

There were 390 suicides within 3 months of discharge from in-patient care, 16% of all patient suicides, an average of 35 deaths per year. This proportion was the same as the rest of the UK (Figure 46). Despite fluctuations, there has been a downward trend (since a peak in 2007) in the number and rate of patients who died within 3 months of in-patient discharge, with the lowest figures in the last 6 years (Figure 49). The average rate of suicide was 16.2 per 10,000 discharges.

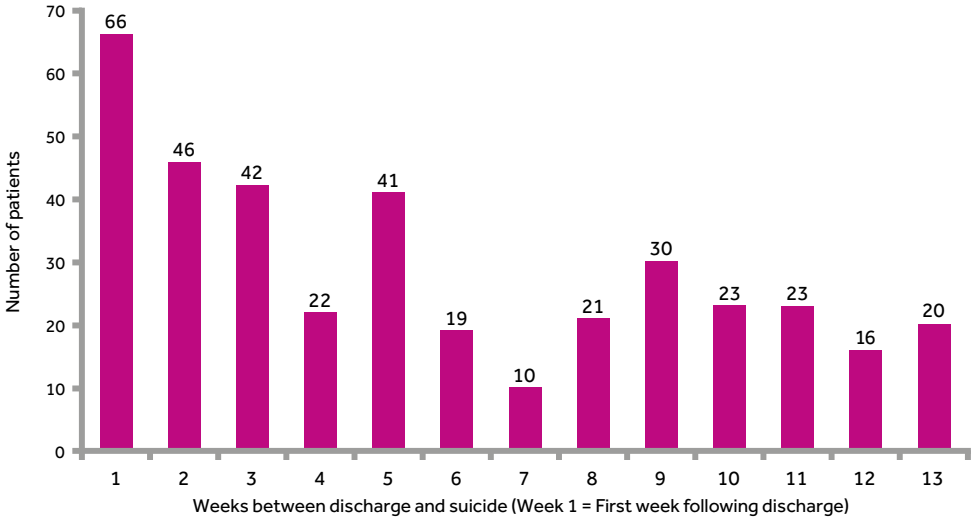
Figure 49: Patient suicide in Scotland: number who died within 3 months of in-patient discharge and rate of suicide per 10,000 discharges



Post-discharge suicides were most frequent in the first week after leaving hospital when 66 (17%) deaths occurred (Figure 50); the highest number occurred on the third day after discharge (16, 24%). The number who died in the first week decreased over the report period. Of the patients who died in the first week, 41% had experienced recent adverse life events, with relationship break-up significantly more common than other post-discharge patients (19% v. 9%). We continue to recommend all patients are followed up within 3 days of discharge from in-patient care.

Of all post-discharge suicides, 66 (19%) died before the first follow-up appointment; the number of these patients did not change over the report period. 36 (10%) died after being discharged from a non-local in-patient unit.

Figure 50: Patient suicide in Scotland: number per week following discharge (2007-2017)



Compulsory Treatment Orders (CTO) in the community

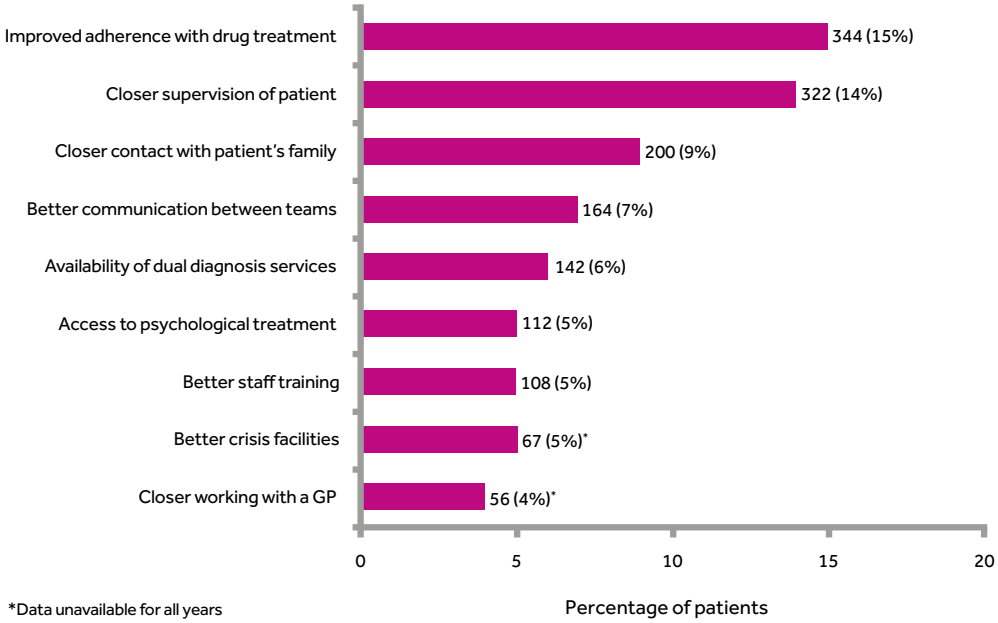
There were 55 patients who died by suicide having been subject to a CTO in the community in 2007-2017, 2% of all patient suicides, an average of 5 deaths per year. A third (18, 33%) were no longer under CTO at the time of suicide.

17 (31%) were non-adherent with drug treatment or had missed their final service contact, despite CTO powers.

What could have reduced risk?

We asked clinicians, in their opinion, what factors may have made the suicide less likely at the time. The most common factors were improved adherence with treatment, closer supervision of the patient, and closer contact with the patient's family (Figure 51). The proportion reporting improved adherence with medication has decreased over the report period.

Figure 51: Patient suicide in Scotland: factors that may have reduced risk



*Data unavailable for all years

HOMICIDE

In 2007-2016, NCISH was notified of 789 homicide convictions, an average of 72 per year. There were 807 victims, an average of 73 per year.

PATIENT HOMICIDE

The total number of patient homicides, i.e. people in contact with mental health services in the 12 months prior to the offence, is based on 114 confirmed convictions of patients for a homicide offence during 2007-2016, plus an estimated two additional patients for 2017 based on the rate of return of homicide data in previous years. This gives a total figure of 116, 15% of all homicide convictions, an average of 11 homicides per year. There were 119 victims, an average of 11 per year.

WALES

WALES

SUICIDE

Between 2007-2017, NCISH was notified of 3,593 deaths in the general population that received a suicide or "undetermined" conclusion, an average of 327 per year. These are referred to here as suicides.

SUICIDE IN THE GENERAL POPULATION

The number and rate of suicide in the general population rose between 2009 and 2012-2013 with lower figures subsequently but an increase in 2017 (Figures 52 and 53). Some deaths are not registered for several months or longer which means that our figures for the most recent years underestimate the final figures.

Figure 52: Number of suicides in the general population in Wales, by gender

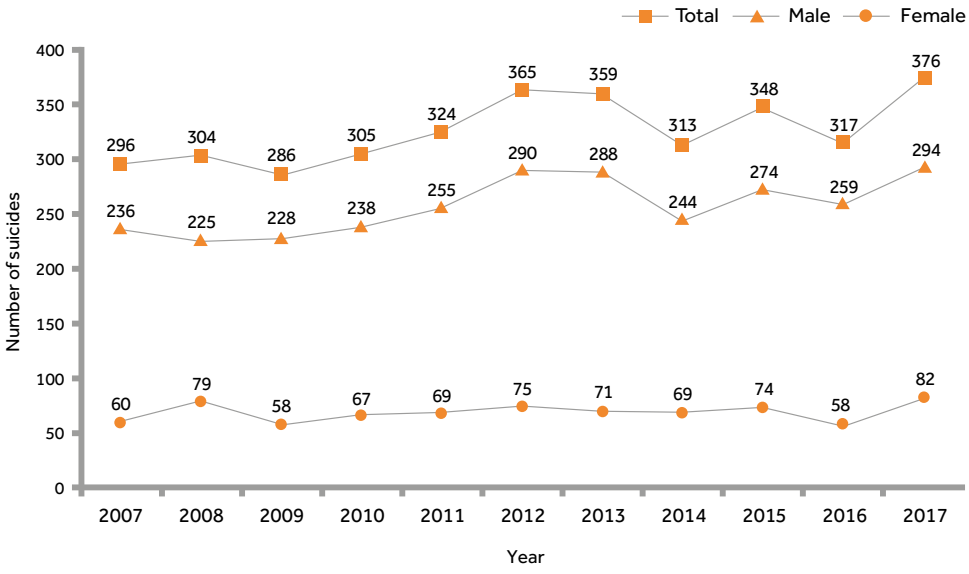
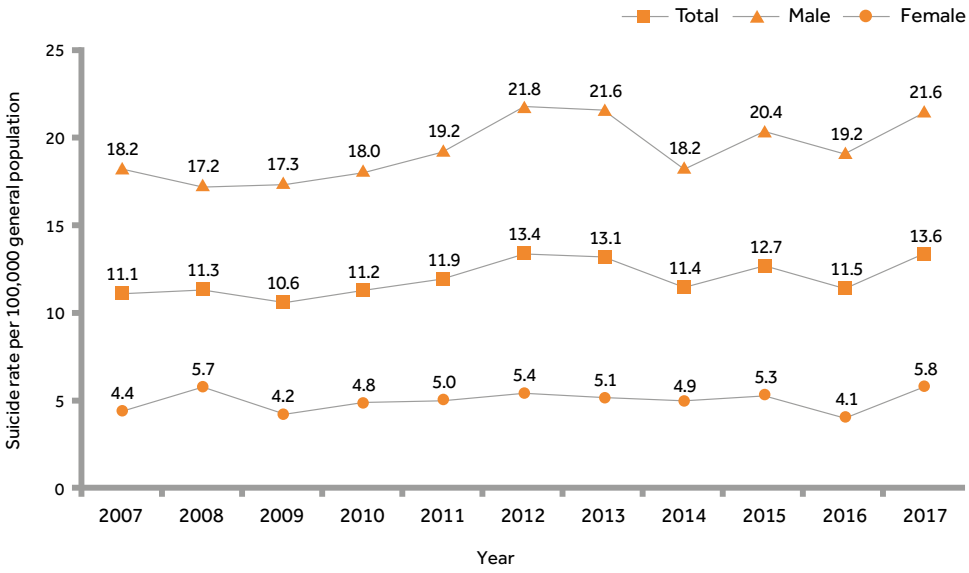


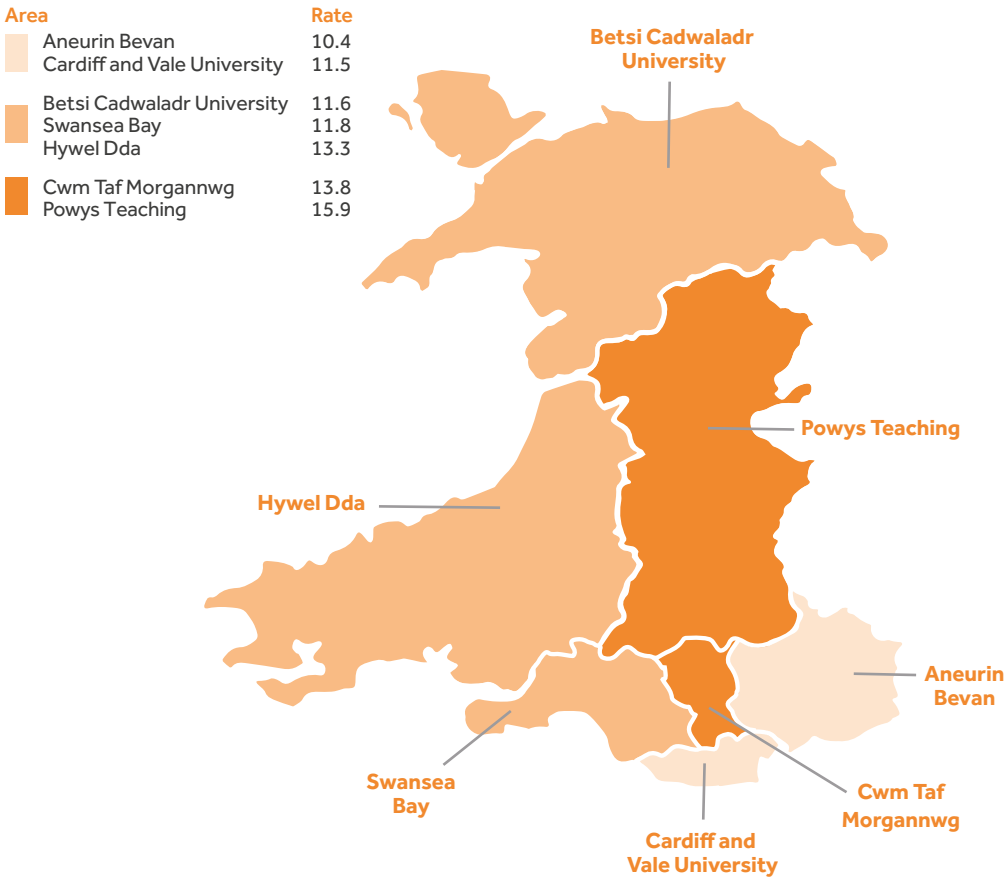
Figure 53: Rates of suicide in the general population in Wales, by gender



Variation in suicide rates by area of residence

There was variation in suicide rates by area of residence (by Health Board) at the time of death (average rate 2015-2017). The highest rate of suicide was in Powys Teaching at 15.9 per 100,000 population, over 50% higher than the lowest in Aneurin Bevan at 10.4 per 100,000 population (Figure 54).

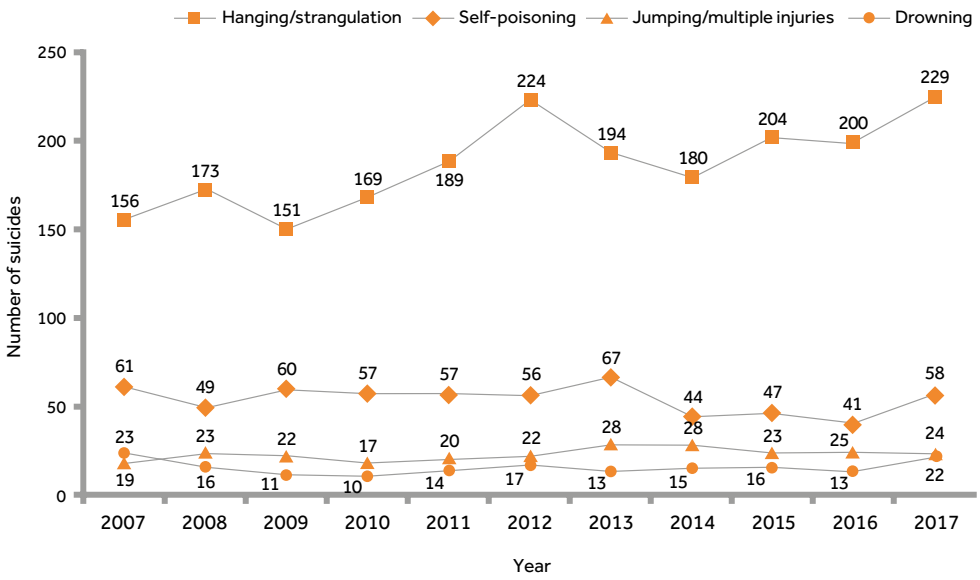
Figure 54: Rates of suicide per 100,000 population, by Health Board of residence (average rate 2015-2017)



Method of suicide

The main methods of suicide are shown in Figure 55. Deaths by hanging/strangulation increased over the report period. The number of deaths by self-poisoning fell after a peak in 2012 but rose in 2017. The less common methods were gas inhalation (4%), cutting (3%) and firearms (2%). Deaths by gas inhalation increased over the report period from 3% in 2007-2011 to 5% in 2012-2016.

Figure 55: Suicide in the general population in Wales: main causes of death



PATIENT SUICIDE

Patient suicide: numbers and rates

During 2007-2017, 802 deaths (22% of general population suicides) were identified as patient suicides, i.e. people in contact with mental health services in the 12 months prior to death. This represents an average of 73 patient suicides per year.

There was an increase in the number of patient suicides between 2007 and 2013 (Figures 56 and 57), broadly in line with general population figures (Figures 52 and 53). Similarly, we are estimating an increase in 2017, though less than the rise in the general population. Figures have been lower since 2013, the main fall being in male patients (Figure 57).

Figure 56: Number of patient suicides in Wales

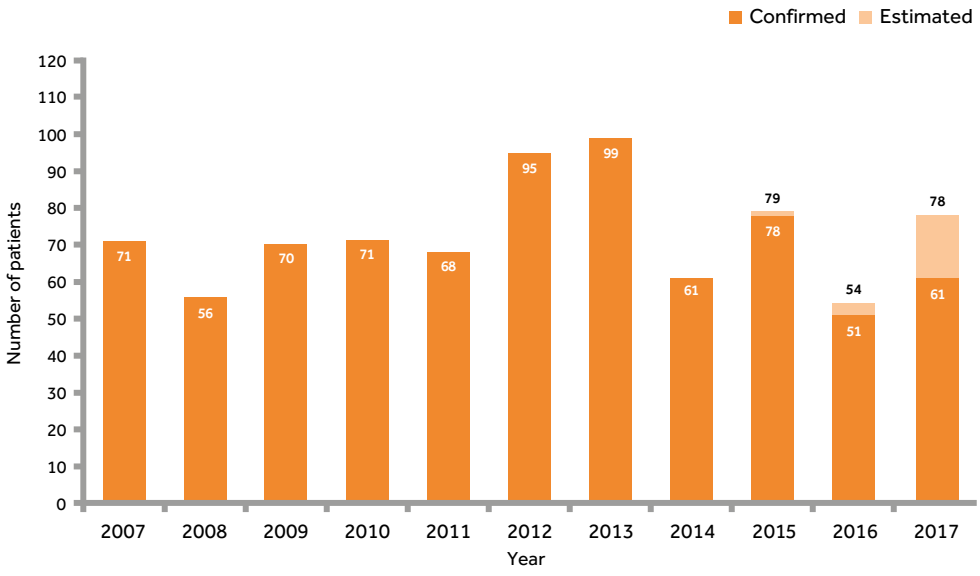
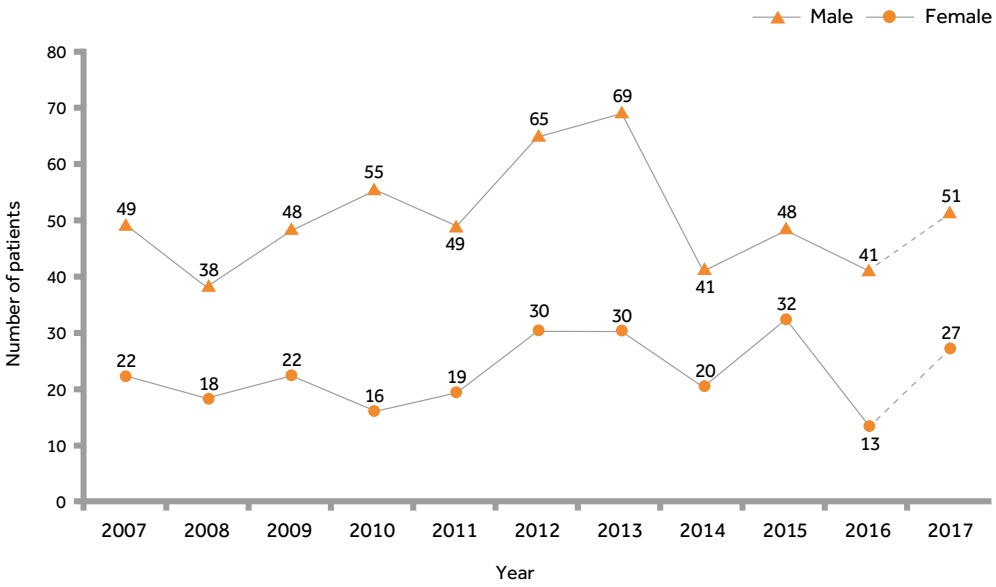


Figure 57: Number of patient suicides in Wales, by gender



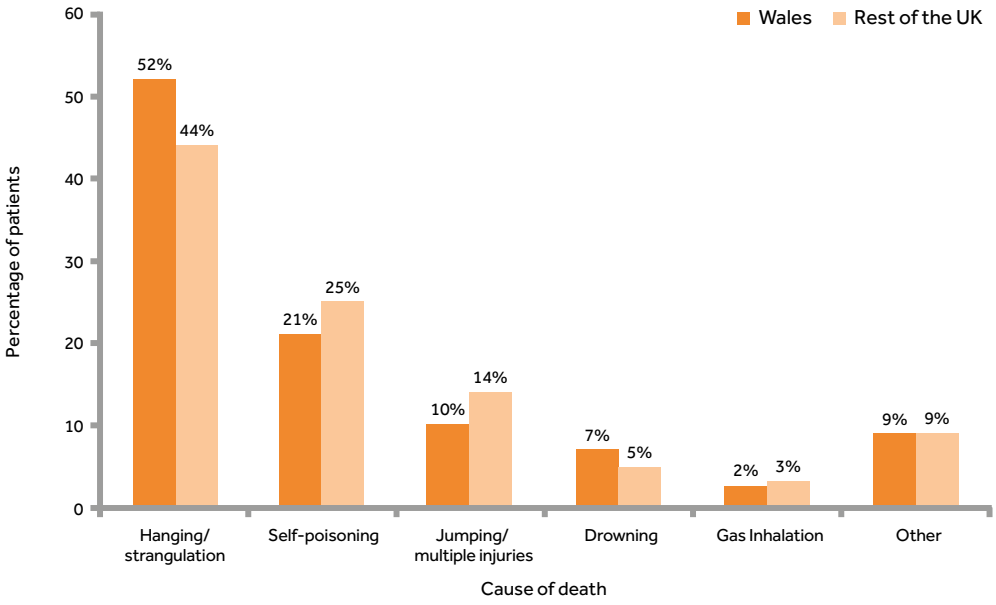
Note: the number in 2015 does not total that in Figure 56 due to rounding

Method of suicide by patients

The percentage of deaths by hanging/strangulation was higher compared to the rest of the UK (Figure 58). There were fewer deaths by self-poisoning and jumping/multiple injuries compared to the rest of the UK.

Hanging/strangulation increased from 2007 to a peak in 2012 but recent figures have fallen. The number of deaths by other methods has changed little. The most common substances used in deaths by self-poisoning were opiates (including opiate compounds) (49, 33%), SSRI/SNRI antidepressants (23, 15%), and antipsychotics (18, 12%).

Figure 58: Patient suicide in Wales v. rest of the UK: main causes of death



Social and clinical characteristics

Tables 30-32 show the main social, clinical and behavioural features of patients who died by suicide. Compared to the other countries in the UK, the proportion who were living alone was lower in Wales, whilst those on long-term sick leave was higher. In 28 (6%) the suicide had occurred on or near an anniversary or other significant date.

Table 30: Demographic characteristics of patients who died by suicide in Wales (2007-2017)

Demographic features	Total=802	
	Number	%
Age: median (range)	45 (13-96)	
Aged under 25†	63	8
Male†	554	69
Not currently married	520	69
Living alone	320	43 ▼
Unemployed	338	45
On long-term sick leave	127	17 ▲
Black, Asian & minority ethnic group	12	2 ▼
Homeless	15	2

† includes estimated figures in 2015-2017
▲▼ = significantly (p<0.01) higher or lower than the rest of the UK; see supplementary information for comparative percentages

Table 31: Clinical characteristics of patients who died by suicide in Wales (2007-2017)

Clinical features	Total=802	
	Number	%
Any secondary diagnosis	412	54
Duration of illness (<12 months)	161	22
First contact with mental health services:		
<12 months	207	28
>5 years	341	47
Last admission was a re-admission	55	13

See supplementary information for comparative percentages

Table 32: Behavioural characteristics of patients who died by suicide in Wales (2007-2017)

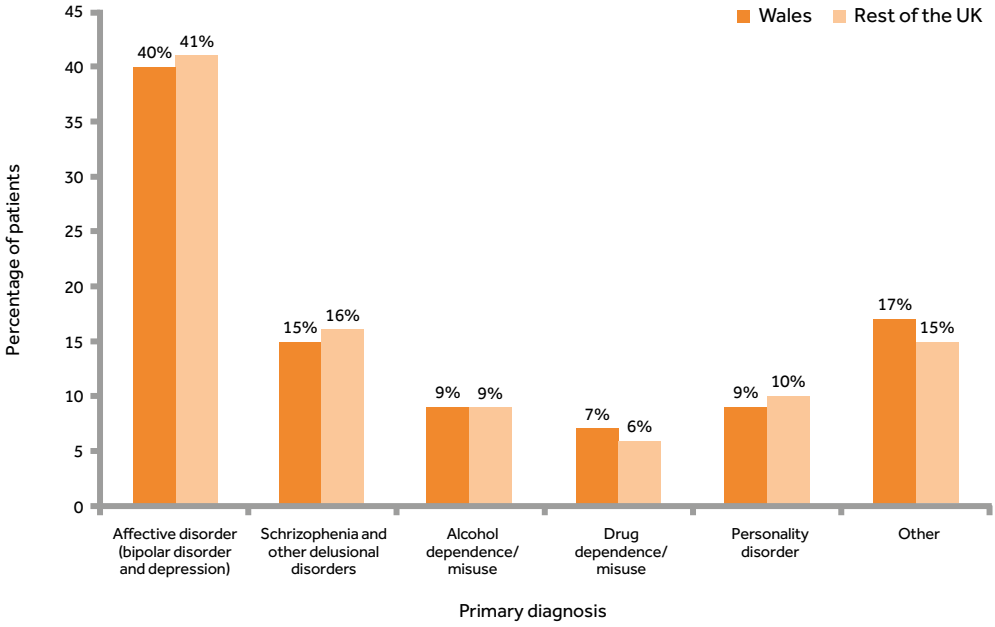
Behavioural features	Total=802	
	Number	%
History of self-harm	507	67
History of violence	179	24
History of alcohol misuse†	383	49
History of drug misuse†	299	39

† includes estimated figures in 2015-2017. See supplementary information for comparative percentages

Diagnosis

The diagnostic profile was similar to the rest of the UK (Figure 59). Of the 'other' diagnoses, 6% were anxiety disorder and 5% were adjustment disorder. There was no overall trend in the number of suicides in relation to diagnosis.

Figure 59: Patient suicide in Wales v. rest of the UK: primary psychiatric diagnosis



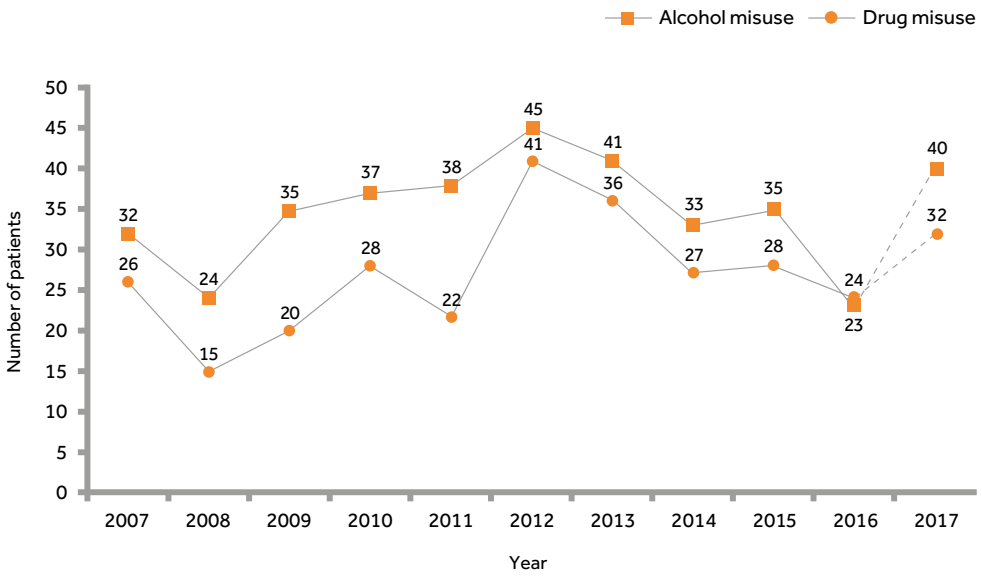
Patients with alcohol and drug misuse

There were an estimated 383 (49%) patients with a history of alcohol misuse, an average of 35 deaths per year; 299 (39%) had a history of drug misuse, an average of 27 deaths per year; and 465 (59%) patients had a history of either alcohol or drug misuse or both, an average of 42 deaths per year.

In both alcohol and drug misuse, numbers have fallen since a peak in 2012, though we are estimating increases in 2017 (Figure 60).

Between 2011-2017, 69 (25%) of those with a drug or alcohol problem were under the care of substance misuse services.

Figure 60: Patient suicide in Wales: number with a history of alcohol or drug misuse



MENTAL HEALTH CARE

Table 33 and Figure 61 show some of the key service-related characteristics of the patients, including priority patient groups, recent contact with services, and estimations of risk.

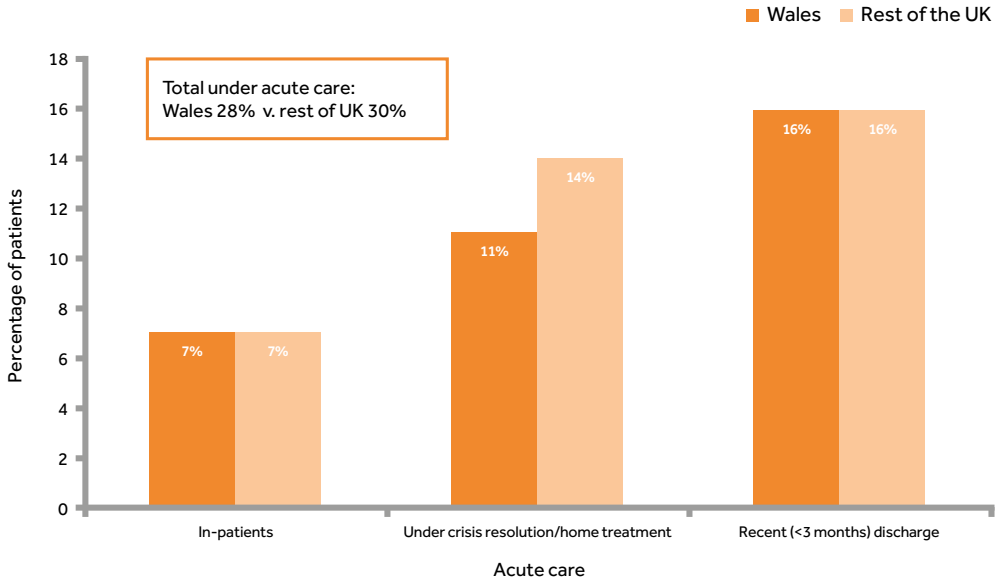
Table 33: Service characteristics of patients who died by suicide in Wales (2007-2017)

Characteristic	Total=802	
	Number	%
In-patient†	53	7
Recent (<3 months) discharge†	128	16
Under crisis resolution/home treatment services†	85	11
Missed last contact in previous month	165	23
Non-adherence with medication in previous month	85	12
Contact with services		
Last contact within 7 days of death	364	47
Short-term risk: low or none	641	89 ▲
Long-term risk: low or none	451	64 ▲

† includes estimated figures in 2015-2017

▲▼ = significantly (p<0.01) higher or lower than the rest of the UK; see supplementary information for comparative percentages

Figure 61: Patient suicide in Wales v. rest of the UK: percentage under acute care



In-patient suicide

There were 53 in-patient deaths by suicide in 2007-2017, representing 7% of patient suicides, similar to the rest of the UK (Figure 61). The number fluctuated from 3 to 10 per year (Table 3). A quarter of patients died on the ward itself (13, 27%); 31 (63%) were on agreed leave or had left with staff agreement; and 5 (10%) died after leaving the ward without staff agreement.

Crisis Resolution/ Home Treatment (CRHT)

There were 85 suicides in patients under CRHT teams, an average of 8 deaths per year. This represented 11% of the total sample, a lower proportion compared to the rest of the UK (Figure 61). The number fluctuated from 2 to 12 per year with no clear pattern. Since 2007 there have been more patient suicides under CRHT (85 patients) than in in-patient care (53 patients), reflecting a change in the nature of acute care.

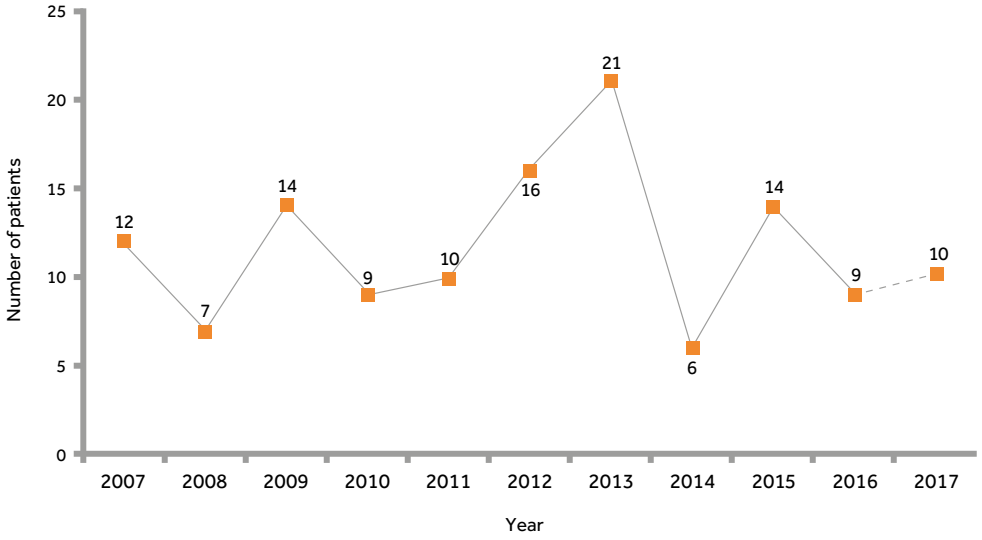
One-third of patients (25, 33%) under CRHT had been discharged from in-patient care in the preceding 3 months; 16 (44% excluding unknowns) died within 2 weeks of discharge, 10 (28% excluding unknowns) within a week. We have collected data on length of time under CRHT since 2012; 19 (50% excluding unknowns) patients who died had been under CRHT services for less than a week.

Patients recently discharged from hospital

There were 128 suicides within 3 months of discharge from in-patient care, 16% of all patient suicides, an average of 12 deaths per year. The proportion was similar to the rest of the UK (Figure 61). The number of post-discharge suicides reached a peak in 2013 with lower figures subsequently (Figure 62). The overall figures for 2015-2017 have been estimated to take into account late notifications.

Post-discharge suicides were most frequent in the 2 weeks after leaving hospital when 39 (35%) deaths occurred. 19 (17%) patients died in the first week after discharge – the highest number occurred on the third and sixth days (5 patients). 16 (15%) died before the first follow-up appointment.

Figure 62: Patient suicide in Wales: number who died within 3 months of in-patient discharge



Community Treatment Orders (CTO)

There were 10 patients who died by suicide having been subject to a CTO in 2009-2017, 1% of all patient suicides in this time period.

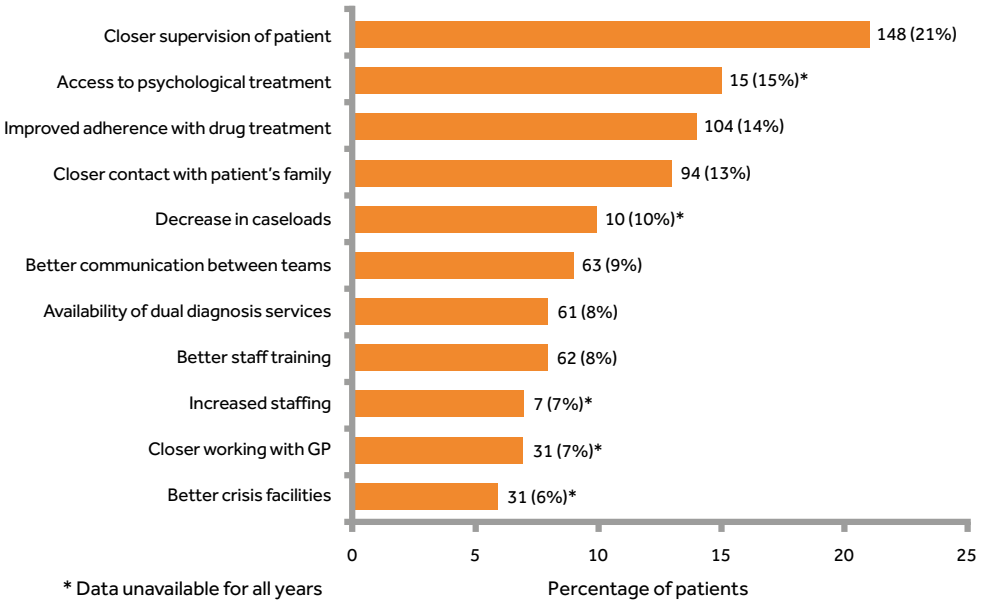
Section 136

In 2012-2017, there were 19 (6%) patients who had been conveyed to a hospital or a custody based place of safety under Section 136 of the MHA in the 3 months prior to suicide.

What could have reduced risk?

We asked clinicians, in their opinion, what factors may have made the suicide less likely at the time. The most common factors were closer supervision of the patient, access to psychological treatment, improved adherence with treatment, and closer contact with the patient's family (Figure 63).

Figure 63: Patient suicide in Wales: factors that may have reduced risk



* Data unavailable for all years

HOMICIDE

In 2007-2017 NCISH was notified of 269 homicide convictions, an average of 24 per year. There were 281 victims, an average of 26 per year. In addition there were 9 homicides followed by suicide that did not lead to conviction in 2007-2017.

PATIENT HOMICIDE

During 2007-2017, 33 people convicted of homicide (12% of the total sample) were confirmed as patients, i.e. people in contact with mental health services in the 12 months prior to the offence, an average of 3 per year. There were 39 victims, an average of 4 per year.

CURRENT NCISH PROJECTS

We are commissioned to undertake standalone projects, looking at particular groups of interest. This allows us to respond to concerns raised by clinicians, service users, and other stakeholders, and to make recommendations for prevention. Our current projects are detailed here.

SUICIDE BY MIDDLE-AGED MEN

Middle-aged men have the highest suicide rate in the UK but are often not in contact with services. This study will combine multiple sources of information to examine factors related to suicide in this hard-to-reach group, including barriers to accessing services.

More specifically, the objectives of the study are:

- To examine the characteristics of middle-aged men who die by suicide;
- To determine how frequently suicide is preceded by factors that are more often associated with suicide by men than by women (e.g. masculinities, socio-economic position, social disconnectedness, reluctance to seek help for both mental and physical health);
- To examine the role of support services; and
- To make recommendations to strengthen suicide prevention for middle-aged men.

The study is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and a report will be published in 2020.

REDUCING SUICIDE: QUALITY IMPROVEMENT AND PATIENT SAFETY

As part of NHS England and NHS Improvement's suicide prevention programme, outlined in the Long Term Plan, we are working with experts in Quality Improvement from the National Collaborating Centre for Mental Health (NCCMH) to support local areas to strengthen their suicide prevention plans. In particular we are focusing on three of the main priority areas identified in the National Suicide Prevention Strategy[3]:

- Mental health services;
- Self-harm services;
- Suicide prevention in men.

Funding has been allocated to 14 NHS and local council STPs with a high level of need. Together with NCCMH, we are working with Quality Improvement Teams in each STP to:

- Help them review their services against established guidelines and recommendations, and improve the quality of care they offer, using bespoke data provided from the NCISH database, benchmarked against the national average;
- Provide expert knowledge of suicide prevention in the three priority areas;
- Identify and help STPs adopt and embed national evidence including NCISH "10 ways to improve safety" into local quality improvement plans;
- Advise on local data collection and suicide prevention plans.

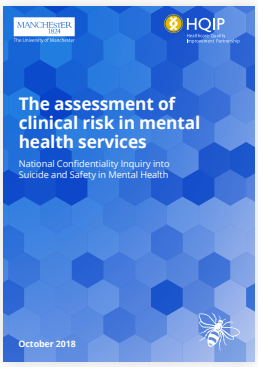
The study is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf on NHS England.

[3]Suicide Prevention Strategy for England. Department of Health
www.gov.uk/government/publications/suicide-prevention-strategy-for-england

RECENT REPORTS AND PUBLICATIONS FROM NCISH

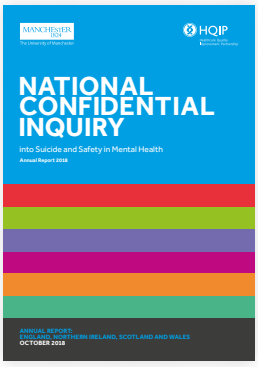
NCISH has published a number of major UK and national reports, and numerous publications using a wide range of methodologies (e.g. case-control, case series, psychological autopsy, and qualitative studies) and data sources (e.g. coroner data, primary care records). Below is a list of all NCISH reports and publications from 2018-2019. A full list of reports and publications can be found on the **NCISH website**.

REPORTS



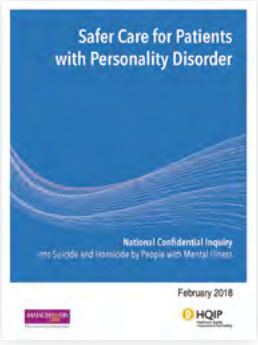
The Assessment of Clinical Risk in Mental Health Services. National Confidential Inquiry into Suicide and Safety in Mental Health (NCISH). Manchester: University of Manchester, 2018. **Download report here**

This study examined which risk assessment tools are currently used in mental health services. We wanted to identify how effectively these tools were being used prior to patient suicide, particularly in patients rated as at low or no risk of suicide at their last contact with a mental health professional. We also asked staff, patients, and carers about their experience of risk and safety assessment, their views on the effectiveness of risk assessment tools, and how their use might be improved. Findings showed most risk assessment tools sought to predict future behaviour. We suggest that tools, if they are used, need to be simple, accessible, and should be considered as part of a wider assessment process that involves families and carers, where possible.



National Confidential Inquiry into Suicide and Homicide by People with Mental Illness. Annual Report: England, Northern Ireland, Scotland and Wales. October 2018. University of Manchester. **Download report here**

Our Annual Report presents findings from 2006 to 2016 and provides figures for suicide, homicide and sudden unexplained deaths, highlighting the priorities for safer services.



Safer Care for Patients with Personality Disorder. National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (NCISH). Manchester: University of Manchester, 2018. **Download report here**

We carried out a detailed mixed-methods investigation into the care of patients with a diagnosis of personality disorder who died by suicide or were convicted of homicide. We identified 154 patients with personality disorder who died by suicide (in 2013) and 41 who were convicted of a homicide (between 2010 and 2013) using data from our large, national database. We collected information from medical records and Serious Incident reports on 87% of the patients identified, and also asked staff and patients to share their experiences of services via an online survey and focus groups. Our findings highlight that patients with personality disorder who died by suicide or committed homicide were not receiving care consistent with NICE guidance, and there is a need for a more comprehensive examination of services for personality disorder, taking into account the safety concerns highlighted in this report.

PAPERS

Appleby L, Turnbull P, Kapur N, Gunnell D, Hawton K. New standard of proof for suicide at inquest. *British Medical Journal* 2019;366:l4745.
https://doi.org/10.1136/bmj.l4745
Leading suicide prevention experts discuss the implications of the Appeal Court of England and Wales recent ruling on the determination of suicide at inquest from a criminal standard – beyond reasonable doubt – to a civil standard – balance of probabilities.

Pitman A, Tham S-G, Hunt IM, Webb R, Appleby L, Kapur N. Access to means of lethal overdose among psychiatric patients with co-morbid physical health problems: analysis of national suicide case series data from the UK. *Journal of Affective Disorders* 2019;257:173-179.
https://doi.org/10.1016/j.jad.2019.06.027
The aim of this study was to examine suicide by mental health patients with co-morbid physical illness. Between 2004 and 2015, there were 3,525 suicides by mental health patients with physical co-morbidity. These patients were more likely to die by self-poisoning than those without physical co-morbidity, and to use medications for a physical disorder, e.g. opioids and paracetamol/opioid compounds. The findings indicate the potential for means restriction in preventing suicide among patients with physical co-morbidities.

Ibrahim S, Hunt IM, Rahman MS, Shaw J, Appleby L, Kapur N. Recession, recovery and suicide in mental health patients in England: time trend analysis. *British Journal of Psychiatry* 2019;215:608-614.
https://doi.org/10.1192/bjp.2019.119
This study examined suicide rates in relation to the recession in mental health patients in England between 2000 and 2016. There was a steady fall in male suicide rates before the recession (2000-2009) but an upward trend during the recession (2009-2011). The rise was found in males aged 45-54, those who were unemployed or had a diagnosis of substance dependence/misuse. The rates of suicide in male patients decreased in the period after the recession (2012-2016). There were no significant recession-related trends in suicide for female patients. The study highlighted the need for more targeted interventions for patients with financial difficulties, and awareness of alcohol and drug misuse at times of economic hardship.

Baird A, While D, Flynn S, Ibrahim S, Kapur N, Appleby L, Shaw J (2019) Do homicide rates increase during weekends and national holidays? *The Journal of Forensic Psychiatry & Psychology* 2019;30:3,367-380.
https://doi.org/10.1080/14789949.2019.1600711
This study examined the timing of homicide offences committed in England in 1996-2015. Offences were more likely to occur at the weekend, mostly on a Saturday. Weekend homicides were associated with: younger perpetrators, males and alcohol consumption. Homicides increased markedly on New Year's Day, and public holidays. Those with a history of mental illness more commonly committed homicide during weekdays. No change in pattern was found after licensing hours were extended in 2005 to allow 24-h licencing for the sale of alcohol. The study indicated a public health approach on educating young people on the health risks associated with alcohol, promoting responsible drinking and conflict avoidance, specifically on special events and at weekends.

Flynn S, Raphael J, Graney J, Nyathi T, Williams A, Kapur N, Appleby L, Shaw J. The personality disorder patient pathway: Service user and clinical perspectives. *Personality and Mental Health* 2019; 13(3):134-143.
https://doi.org/10.1002/pmh.1444
This qualitative study focused on service users with a diagnosis of personality disorder and examined perspectives on how services could be improved. 131 service users contributed to an online survey and 45 clinicians discussed their experiences in focus groups. Both staff and patients raised issues with the diagnosis of personality disorder, the absence of a coherent care pathway, access to psychological treatment and staff training. The study highlighted that elements of the care pathway are disjointed and not working as effectively as they could.

Baird A, Shaw J, Hunt IM, Kapur N, Appleby L, Webb RT. National study comparing the characteristics of patients diagnosed with schizophrenia who committed homicide vs. those who died by suicide. *Journal of Forensic Psychiatry & Psychology* 2018;29(4):674-689.
https://doi.org/10.1080/14789949.2018.1434226
This study compared the socio-demographical and clinical characteristics of male patients with schizophrenia who committed homicide during 1997-2012 with those who died by suicide. Homicide perpetrators had frequently disengaged with mental health services (e.g. missed appointments) while those who died by suicide were more often in recent contact with services, including being an in-patient at the time of death. Awareness of these issues is important in clinical risk assessment of individual patients.

Minero VA, Dickson H, Barker E, Flynn S, Ibrahim S, Shaw J. The patterns of homicide offence characteristics and their associations with offender psychopathology. *Journal of Investigative Psychology and Offender Profiling* 2018;15(3):304-318.
https://doi.org/10.1002/jip.1514
The study examined crime scene patterns in 759 homicide offenders with different demographic and clinical characteristics in England and Wales (1997-2014). Patterns between the type of method, circumstance of homicide, and victim gender and age identified three patterns: 'male conflict homicide', 'intimate female homicide' and 'child homicide'. Each pattern was associated with a particular psychiatric diagnosis, e.g. 'male conflict homicide' was associated with personality disorder, alcohol and drug dependence. The findings may assist homicide investigations by identifying specific homicide patterns in offenders with a particular mental illness.

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