



The University of Manchester

The University of Manchester Research

# The Manchester Self-Harm Project 5 Year Report

# **Document Version**

Final published version

Link to publication record in Manchester Research Explorer

Citation for published version (APA): Bickley, H., Farooq, B., Donaldson, I., Ward, J., Appleby, L., & Kapur, N. (2021). The Manchester Self-Harm Project 5 Year Report: Key Figures & Trends in Data from 2012-2016.

# Citing this paper

Please note that where the full-text provided on Manchester Research Explorer is the Author Accepted Manuscript or Proof version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version.

# **General rights**

Copyright and moral rights for the publications made accessible in the Research Explorer are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

# Takedown policy

If you believe that this document breaches copyright please refer to the University of Manchester's Takedown Procedures [http://man.ac.uk/04Y6Bo] or contact uml.scholarlycommunications@manchester.ac.uk providing relevant details, so we can investigate your claim.





# The Manchester Self-Harm Project

5 YEAR KEY FIGURES AND TRENDS IN DATA FROM 2012 TO 2016

September 2021

# Publication date: September 2021

© The University of Manchester. All rights reserved. Not to be reproduced in whole or in part without the permission of the copyright owner.

# Please reference as

Bickley, H., Farooq, B., Donaldson, I., Ward, J., Appleby, L., Kapur, N. and Clements, C. (2021) The Manchester Self-Harm Project 5 Year Report: Key Figures & Trends in Data from 2012-2016. The University of Manchester. Manchester, England.

# **Acknowledgements**

We wish to thank all staff and patients at North Manchester General Hospital, Manchester Royal Infirmary, Wythenshawe Hospital and Greater Manchester Mental Health NHS Foundation Trust, and specifically the Emergency Department clinical teams, liaison psychiatry and Trust Governance and Business Intelligence teams for their contribution and support.

# **Ethical approval**

The Manchester Self-Harm Project is part of a clinical audit system and has been ratified by local research ethics committees. The Manchester Self-Harm Project is fully compliant with the UK Data Protection Act 1998, is GDPR compliant, has approval from the Confidentiality Advisory Group (CAG) and has support under Section 251 of the NHS Act 2006 regarding the use of patient—identifiable information.

# **Funding**

The Manchester Self-Harm Project is funded by the Department of Health and Social Care (DHSC), as part of the Multicentre Study of Self-Harm in England. The views and opinions expressed in this report are those of the authors and do not necessarily reflect those of the DHSC. The DHSC had no role in the design, collection, analysis or interpretation of data, or the writing of this report.

# Contact

Iain Donaldson, Research Administrator Email: <a href="mash@manchester.ac.uk">mash@manchester.ac.uk</a> http://manchester.ac.uk/mash

Follow us on twitter @mashproject

# **Background**

The Manchester Self-Harm Project has collected data on people presenting to Manchester Emergency Departments (EDs) since September 1997. Until September 2002, we only collected data on episodes resulting in a psychosocial assessment. Since then we have collected data on both assessed and non-assessed episodes.

This report is based on combined data from three EDs: Manchester Royal Infirmary at Manchester University NHS Foundation Trust, North Manchester General Hospital at Pennine Acute Hospitals NHS Trust, Wythenshawe Hospital at Manchester University NHS Foundation Trust, and mental health data from the Greater Manchester Mental Health NHS Foundation Trust.

# The Manchester Self-Harm Project: 5 Year Key Figures & Trends in Data from 2012-2016

Harriet Bickley, Bushra Farooq, Iain Donaldson, Jackie Ward, Louis Appleby, Nav Kapur & Caroline Clements

September 2021

# **Contents**

Summa	ry of findings	3
1. I	ntroduction	4
1.1	L Data collection	4
1.2	Numbers of self-harm episodes and individuals	4
1.3	Number of self-harm presentations	5
2. 1	Manchester self-harm rates	6
2.1	Short-term trends	6
2.2	2 Longer-term trends	6
3. 9	Social & demographic characteristics	9
3.1	L Age and gender	9
3.2	2 Marital status	9
3.3	B Living arrangements	9
3.4	1 Ethnicity	11
3.5	5 Employment status	12
3.6	6 Precipitating problems	13
4. (	Clinical characteristics	14
4.1	Repetition of self-harm	14
4.2	2 Alcohol and drug misuse	15
4.3	B Premeditation and suicidal intent	16

5.	Self-harm methods, timing and hospital management		
	5.1	Method of harm	17
	5.2	Drugs taken in self-poisoning	18
	5.3	Timing	21
	5.4	Hospital management of episodes	22
6.	Referer	nces	24

# **Summary of findings**

# Rates of self-harm in Manchester

There were 19,917 self-harm presentations to Emergency Departments in Manchester from 1<sup>st</sup> January 2012 to 31<sup>st</sup> December 2016, by 12,393 individuals. The rate of self-harm presentations between 2012 and 2016 in those aged 15 and over was 427 per 100,000 population. The self-harm rate declined overall between 2012 and 2015, but rose in 2016. However, the increase in 2016 was not evident across all gender and age groups.

Between 2012 and 2016, the highest self-harm rate in women and girls was in those aged 15-19 (845 per 100,000). The highest self-harm rate in men and boys was in those aged 40-44 (550 per 100,000). Women and girls had higher rates than men and boys in all age groups up to age 44, while men had higher rates of self-harm at ages 45 to 49 and from age 55 onwards.

Over time, self-harm rates in women aged over 15 significantly decreased by 22% between 2003 and 2016 (from 589 to 461 per 100,000) with a similar but non-statistically significant decrease of 21% in men over the same period (from 437 to 345 per 100,000).

# Demographic characteristics of individuals who self-harm

Over half the cohort were female (56%). A third (31%) lived with parents and/or siblings, 24% lived with a partner and 15% lived alone. Almost one-fifth (17%) of individuals were from BAME (Black, Asian and Minority Ethnic) groups, including 6% South Asian and Chinese, 3% Black people and 4% of mixed heritage. There was a higher proportion of White people in the self-harm group, than in the general Manchester population. The South Asian, Black, Chinese and mixed heritage ethnic groups contained higher proportions of women than the White group.

Almost half of individuals were unemployed (46%), a quarter (24%) were students and a quarter (23%) were employed. A higher proportion of men (54%) than women (39%) were unemployed. The ratio of women to men was particularly high in students (72:28), those registered as sick (60:40) and in homemakers/carers (96:4). Over time, the proportion of students in our sample increased. Students were less likely than people in other employment groups to receive a psychosocial assessment.

# **Precipitating problems**

The most frequently cited problems precipitating self-harm were mental health issues, relationship problems with a partner/ex-partner and alcohol misuse. Women cited abuse, problems in family relationships and problems in

relationships with others more often than men. Men reported drug and alcohol misuse more often than women.

# Clinical characteristics of individuals who self-harm

# Repetition of self-harm:

- Between 2012 and 2015, 18% of individuals presented with a second episode of self-harm within 12 months.
- 68% self-reported previous self-harm in their lifetime and 38% self-reported self-harm within the past year.

### Alcohol and drug use:

- Clinicians identified 32% of individuals as currently misusing or dependent upon alcohol (39% of men, 26% of women).
- 24% were identified as using, misusing or dependent upon drugs (34% of men, 16% of women).

# Characteristics of self-harm presentations

Primary method of self-harm:

- 66% self-poisoning with drugs
- 21% self-cutting or self-stabbing
- 12% self-injury other than self-cutting or self-stabbing e.g. hanging, traffic related, head-banging

Of the 68% of episodes which used self-poisoning with drugs as a primary or secondary method of self-harm:

- 61% involved analgesics
- Including 11% which involved opioid analgesics
- 28% involved antidepressants
- 30% involved other drugs (including street drugs)

# Timing of presentation:

There was a peak in self-harm presentations made by men aged 25-34 on weekends, and a peak in girls younger than 15 on Mondays. The highest number of presentations were between 8pm and midnight (24%) and the lowest numbers were between 6am and 10am (7%).

# Clinical management by ED staff:

- 38% were admitted to a medical bed
- 21% were referred to mental health services
- 27% self-discharged without a referral or did not wait for treatment.

# Clinical management by mental health staff:

- 48% of all presentations were assessed by a mental health specialist, and of these:
- 32% were referred to their GP, as the only outcome
- 33% were referred to mental health services (including outpatients, community drug/alcohol teams, day hospital)
- 4% were referred to other organizations, e.g. social services, counselling, voluntary organizations
- 14% were admitted to a mental health in-patient unit.

# 1. Introduction

Data on all City of Manchester Emergency Department (ED) presentations for self-harm have been collected by the Manchester Self-Harm Project since 2003. This report focuses on presentations (episodes) for self-harm to the study hospitals between 2012 and 2016 inclusive. Section 2 reports on rates between 2003 and 2016. Our previous reports can be accessed via <a href="https://www.manchester.ac.uk/mash/reports">www.manchester.ac.uk/mash/reports</a>.

For the purpose of this report 'self-harm' is defined as 'any acts of intentional self-injury or self-poisoning, irrespective of ... motivation or degree of suicidal intent', and encompasses suicide attempts and acts of self-harm with other motives or intentions (Hawton et al., 2013).

The Manchester Self-Harm Project is a collaboration between the University of Manchester and three NHS Trusts:

Greater Manchester Mental Health NHS Foundation
 Trust which includes mental health liaison teams covering the three EDs in Manchester

Three Emergency Departments located at:

- North Manchester General Hospital,
  Pennine Acute Hospitals NHS Trust
- Manchester Royal Infirmary,
  Manchester University NHS Foundation Trust
- Wythenshawe Hospital,
  Manchester University NHS Foundation Trust

The aims of the Manchester Self-Harm Project are to:

- Monitor rates of self-harm
- Evaluate and inform clinical services
- Provide evidence on which service development and training may be based
- Provide an infrastructure for research on patterns of self-harm, clinical management and risk factors
- Inform and make recommendations on national suicide prevention initiatives

The Manchester Self-Harm Project collaborates with similar high-quality self-harm monitoring centres in Oxford and Derby, through the Multicentre Study of Self-Harm in England (<a href="https://www.psych.ox.ac.uk/research/csr/ahoi">https://www.psych.ox.ac.uk/research/csr/ahoi</a>). Multicentre monitoring of self-harm is an integral component of the National Suicide Prevention Strategy for England, and provides an indicator for self-harm nationally (DoH, 2002; DoH, 2012; Royal College of Psychiatrists, 2005a; Royal College of Psychiatrists, 2005b; DHSC, 2019). The Department of Health and Social Care (DHSC) funds the Multicentre Study of Self-Harm in England. The current work programme aims to increase understanding of self-harm in children and young people, people in mid-life, people experiencing homelessness, people from ethnic minority

backgrounds, and the health economics of self-harm and associated mortality.

### 1.1 Data collection

The Manchester Self-Harm Project collects data on presentations following self-harm to the three participating EDs. When a patient presents to the ED, a brief assessment form is sometimes completed by the treating medical clinician.

**Table 1:** Information collected from self-harm presentations

Patient Data	Management Data
Socio-demographic characteristics, mental health history, details of the self-harm, precipitating events, mental state, suicidal intent	Risk assessment, communication with GP, follow-up arrangements

When no ED form is completed, information is obtained from electronic records and medical notes held at the hospital. In addition, information from psychiatric assessments is collected for patients seen by a mental health specialist. Data from psychosocial assessments are also obtained from electronic notes.

# 1.2 Numbers of self-harm episodes and individuals

Unless otherwise stated, all percentages in this report are valid percentages, i.e. episodes where missing or not known answers for the relevant variable are excluded from the denominator in the percentage calculations.

Each time an individual presents to the ED with a new act of self-harm, they are recorded as having a new episode. An individual may have presented to the ED with self-harm more than once during the study period. An individual's first presentation for self-harm to the ED during the study period is defined as their 'index episode'. Chapters 2, 3 and 4 are based on individuals' index episodes, unless otherwise stated. Section 5 is based on all episodes between 2012 and 2016 unless otherwise stated.

**Table 2:** Episodes and individuals presenting to the three hospitals

All Study Hospitals	2012-2016	Females	Males
Episodes	19,917	11,265	8,648
Individuals	12,393	6,939	5,450

The female to male ratio, for both overall episodes and for individuals was approximately 13 females to 10 males. Four individuals were recorded as transgender. This is likely to be an underestimate as guidelines now recommend that transgender people be recorded in medical notes under their preferred gender identity.

There were 2,878 (23%) individuals who had more than 1 episode of self-harm, and 38% of episodes between 2012 and 2016 were by people who had already presented to the ED for self-harm during our study period.

# 1.3 Numbers of self-harm presentations treated and assessed

Table 3: Management of self-harm episodes<sup>1</sup>

All Study Hospitals	2012-2016 N=19,917	2012-2016 Annual average N=3,983 (%)
Treated	18,812	3,762 (94%)
Patient did not wait for treatment	1,105	221 (6%)
Total assessed	10,071	2,014 (51%)
Of which: Assessed by ED staff &/or	1,278	256 (6%)
Received a psychosocial assessment by a mental health specialist	9,497	1,899 (48%)
Of those who waited for treatment (Valid N=18,812): Admitted to a medical ward	7,660	1,532 (42%)
Of those receiving a mental health specialist psychosocial assessment (Valid N=8,676):		
Referral to specialist mental health follow-up	2,876	575 (33%)
Referral to non- statutory mental health/voluntary/other services	363	73 (4%)
Referral to GP only	2,783	557 (32%)
Admitted to a mental health in-patient ward	1,216	243 (14%)

Most patients (94%) who present to the ED with self-harm wait to be treated. The proportion of patients who did not wait for treatment increased from 4% in 2012 to 7% in 2016. The proportion of patients who did not wait for treatment ranged from 2% to 8% across the three EDs.

Half of patients (51%) receive an assessment by ED staff and/or a psychosocial assessment by mental health staff. Half of self-harm presentations by men and boys (49%), and 47% of presentations by women and girls resulted in a psychosocial assessment. The proportion of episodes resulting in a psychosocial assessment ranged from 43% to 53% across the three EDs.

Of those who waited for treatment, 42% were admitted to a medical ward. This ranged from 37% to 50% across the three FDs.

Of those who received a psychosocial assessment from mental health staff, 33% were referred for further mental health follow-up care, excluding in-patient admission. This ranged from 30-35% across the three EDs.

Episodes with a primary method of self-injury (by cutting or other self-injury) were less likely to receive a psychosocial assessment (43%) than those with a primary method of self-poisoning (by medication or non-medication) (50%).

## Published research – self-harm in mid-life

In the Multicentre Study of Self-Harm, 26% of episodes were by people in mid-life (aged 40-59) (Clements et al., 2019). The men's self-harm rate in the combined data from Manchester, Oxford and Derby increased between 2000 and 2013, particularly after 2008, and followed the same pattern as men's suicide rates. Women's self-harm rates were relatively stable between 2000 and 2013, and did not follow the same pattern as suicide rates. Alcohol use within 6 hours of the self-harm act, unemployment, and housing and financial issues as precipitants of selfharm were more common in men who self-harmed than women, whereas poor mental health as a precipitant of self-harm was more common in women. The 12-month self-harm repetition rate was 25% in both men and women, and during the study's follow-up period, 2.8% of men and 1.2% of women died by suicide. Addressing underlying issues, alcohol misuse and economic factors may help prevent further self-harm and suicide.

<sup>&</sup>lt;sup>1</sup> The patient may have been referred to more than one service.

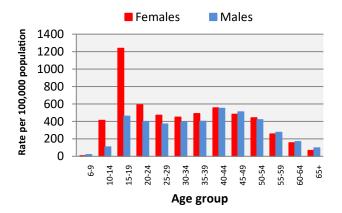
# 2. Manchester Self-Harm Rates

# 2.1 Short-term trends in self-harm rates

**Table 4**: Annual rates of self-harm in Manchester per 100,000 population, aged 15 years and over, by gender, 2012 to 2016<sup>2</sup>

Rates	2012	2013	2014	2015	2016	2012- 2016
Total	474	461	410	389	402	427
Women	494	524	469	456	461	480
Men	454	400	351	323	345	374

**Figure 1:** Average rates of self-harm in Manchester per 100,000 population, aged 6 years and over, by gender, 2012-2016



# Women

Rates in women decreased between 2013 and 2015, rising slightly in 2016. Women aged 15-19 had the highest self-harm rate (1,239 per 100,000), equivalent to around one percent of women aged 15-19 who live in Manchester, and higher than in 2010-2011 (1,083 per 100,000) (Bickley et al., 2013). The increase in rates between 2015 and 2016 was not evident across all age groups; there was an increase in those aged 15-24 and 25-34, but a decrease in those aged 35-54 and 55+.

# Men

Rates in men decreased between 2012 and 2015, rising slightly in 2016. The highest male self-harm rate was in those aged 40-44 (550 per 100,000), as was the case between 2010 and 2011 (Bickley et al., 2013). Between 2015 and 2016, there was an increase in rates in those aged 15-24, 25-34 and 35-54 but a decrease in those aged 55+.

# **Gender comparisons**

Women and girls had higher self-harm rates than men and boys in all 5-year age groups (between 10-44 years) and in the age group 50-54. Men had higher rates than women in age groups 45-49, 55-59, 60-64 and 65 and over.

# 2.2 Longer-term trends in self-harm rates

**Table 5**: Annual rates of self-harm in Manchester per 100,000 population, aged 15 years and over, by gender, 2003-2016

Rates	2003	2016	% change	p-value <sup>1</sup>
Total	514	402	-22%	<0.001
Women	589	461	-22%	<0.001
Men	437	345	-21%	0.350

<sup>&</sup>lt;sup>1</sup> Poisson regression was used to investigate trends in self-harm rates over time.

Between 2003 and 2016, there was a statistically significant decrease in the overall self-harm rate in those aged 15 and over, decreasing from 514 to 402 per 100,000 (-22%). All the sex- and age-specific self-harm rates showed variability over time.

# Women

From 2003, there was a steady statistically significant decrease in female rates until 2010, then rates in females rose to a peak in 2013. Women aged 15-24 consistently had the highest rates throughout 2003 to 2016. Although those aged 55 and over consistently had the lowest rates of self-harm, they were the only age group to have a higher self-harm rate in 2016 than in 2003. Between 2003 and 2016, the most consistent decreases in self-harm rates in women were seen in age groups 25-34 and 35-54.

### Men

There was a steady, statistically significant decrease in male rates between 2003 and 2009, then they rose to a peak in 2012. Those aged 35-54 often had the highest rates among men each year. The sharpest rise in any sex or age group was seen in men aged 35-54, between 2008 and 2012, when the rate rose by a statistically significant 75%. Although those aged 55 and over consistently had the lowest rates of self-harm, they were the only age group to have a higher self-harm rate in 2016 than in 2003.

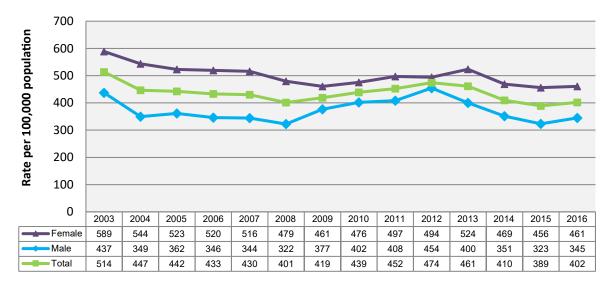
<sup>&</sup>lt;sup>2</sup> Rates per 100,000 population are based on the index (first chronological) episode in each year for individuals aged 15 and over residing in the City of Manchester Postcode area (i.e. Manchester Local Authority area), presenting to any of the three Manchester Emergency Departments

following self-harm. Residency in the City of Manchester Postcode area was identified via postcode using GeoConvert (GRO/ONS/NISRA, 2019). The denominators used to calculate the rates were the corresponding age and gender population groups in the Manchester Local Authority area (ONS, 2019).

# **Gender comparisons**

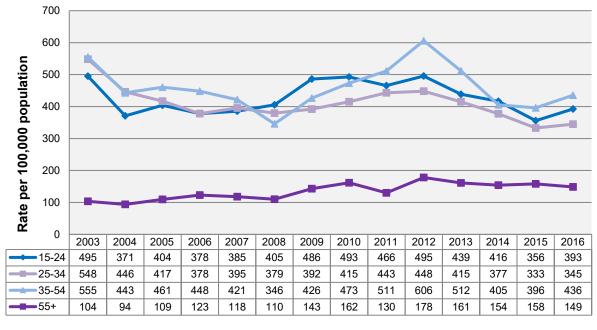
Overall patterns in women (589 to 461 per 100,000, a 22% decrease) and men (437 to 345 per 100,000, a 21% decrease) were similar, although the rate decrease in men was not statistically significant. Also, the women's rate increased between 2010 and 2013 but the men's increased between 2009 and 2012.

Figure 2a: Rates of self-harm by gender, age 15+, 2003 to 2016



# Year of presentation

Figure 2b: Rates of self-harm among males, by age group, 2003 to 2016



Year of presentation

Rate per 100,000 population 15-24 25-34 35-54 55+ 

Figure 2c: Rates of self-harm among females, by age group, 2003 to 2016

Year of presentation

# Published research - suicide & self-harm trends

The Multicentre Study of Self-Harm found self-harm trends between 2003 and 2012 showed similar patterns to suicide trends in both men and women (Geulayov et al., 2016). A stable 12-month repetition rate of 21% was found in those presenting to the ED during this period. Almost a third of those aged 15 and over were already under the care of mental health services. One half (53%) of those presenting received a psychosocial assessment, varying between 41-69% across the three centres, despite the NICE (2004) guidelines on the short-term management of self-harm recommending that everyone presenting to the ED for self-harm should receive a psychosocial assessment. The self-harm rates in Oxford were lower than in Manchester and Derby, in both men and women, reflecting the relative levels of socio-economic deprivation. To help break the relationship between low socio-economic status and self-harm, front-line job centre and advice agency staff should be trained to identify people with/at risk of mental health issues due to economic and employment difficulties.

# Published research - self-harm statistics

The Manchester Self-Harm Project and the Multicentre Study of Self-Harm in England collect comprehensive and detailed data on self-harm. Routinely collected hospital data on self-harm is also collected by the NHS and is available via Hospital Episode Statistics (HES). Using data from 2003-2012, rates of self-harm based on the routinely collected HES admission and emergency department data (which are often used in health statistics, to inform service provision, and are quoted in the media) were compared with detailed self-harm data collected by the Multicentre Study of Self-Harm in England (Clements et al., 2016). HES statistics underestimated overall rates of self-harm by approximately 60%, but this varied by city. The more complete Multicentre dataset showed a decrease and subsequent increase in self-harm rates over the study period, whereas HES data only showed a decrease in rates, illustrating that HES data did not capture important changes in self-harm trends over time.

# 3. Social and Demographic Characteristics

In the five year study period (from 2012 to 2016), 12,379 individuals (where the patient's age was known) presented with self-harm. The data in this chapter is based on an individual's first chronological episode, i.e. index episode, within 2012-2016, not all their episodes. These data include individuals who lived outside of Manchester Local Authority area.

# 3.1 Age and gender

Figure 3a: Female index episode by age, 2012 to 2016

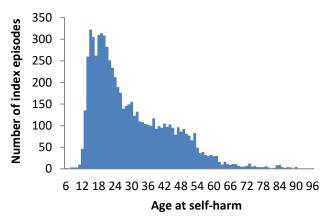
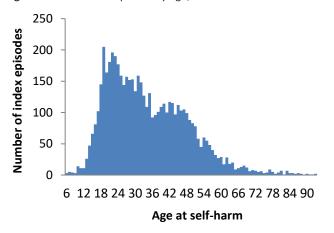


Figure 3b: Male index episode by age, 2012 to 2016



Figures 3a & 3b: Self-harm in males was skewed towards the younger age groups, but also had a secondary smaller peak around mid-life. Self-harm in females was also skewed towards the younger age groups, but without a further prominent secondary peak.

Table 6: Due to the skewed nature of the data, the median is a better indicator of the average age than the mean. The median female age of 26 was younger than the median male age of 32. More than half (56%) of individuals presenting

with self-harm were female and 44% male. 47% of females were aged under 25, compared to 30% of males.

Table 6: Age and gender of individuals who self-harm, 2012 to 2016

Gender	N = 12,379 (%)	Age in years Median (Mean, Range)
Female	6,932 (56%)	26 (30, 6 - 96)
Male	5,443 (44%)	32 (34, 6 - 93)

### 3.2 Marital status

Table 7: The marital status category percentages were very similar in men and women.

Table 7: Marital status of individuals who self-harm, 2012 to 2016

Marital Status	Female N=6,754	%	Male N=5,246	%
Single	4,796	71%	3795	72%
Partnered	1,357	20%	996	19%
Separated /divorced	489	7%	389	7%
Widowed	112	2%	66	1%

# 3.3 Living arrangements

Table 8: Until 2013, we only collected living circumstances data for episodes resulting in an assessment. This table uses all available data from 2012 to 2016. Between 2012 and 2016, annual data completeness for living circumstances ranged between 48 to 70%.

Women were more likely than men to live with children only (10% vs. 1%), and men were more likely than women to live alone (19% vs. 13%) or be homeless (5% vs. 1%).

**Table 8:** Living arrangements of individuals who self-harm, 2012 to 2016

Living Arrangement	Females N=4,456 (%)	Males N=3,400 (%)	Total N=7,856 (%)
Parent/ sibling	1,403 (31%)	1,029 (30%)	2,432 (31%)
Partner	1,066 (24%)	851 (25%)	1,917 (24%)
Alone	573 (13%)	629 (19%)	1,202 (15%)
Friends/ other relatives	497 (11%)	399 (12%)	896 (11%)
Children only	446 (10%)	22 (1%)	468 (6%)
Homeless	42 (1%)	183 (5%)	225 (3%)
Hostel/ lodgings	96 (2%)	108 (3%)	204 (3%)
Other	333 (7%)	179 (5%)	512 (7%)

# Published research – reporting of previous self-harm

Applying a case-control methodology to Manchester Self-Harm data, people who accurately reported previous self-harm were compared with those who did not (Clements et al., 2020). Inaccurate reporting by patients of previous self-harm was more common in men, the middle-aged and the employed. People who did not report previous self-harm, despite having a history of self-harm, were less likely to be referred to mental health services, emphasising the need for careful assessment of every self-harm presentation to the ED. Non-reporting of previous self-harm may be due to stigma, previous negative experiences with healthcare staff or forgetting.

# Published research – suicide & self-harm in school-aged children

The Multicentre Study of Self-Harm used hospital monitoring data and data from a school survey to estimate the incidence of self-harm in those who present to hospital and those in the community who do not come to the attention of services (Geulayov et al., 2018a). Mortality statistics were also used to compare these with suicides in children and adolescents aged 12 to 17. In 12-14 year olds, for each girl who died by suicide, 1255 girls attended hospital for self-harm and 21 995 reported selfharm in the community. For each boy who died by suicide, 109 boys attended hospital following self-harm and 3067 reported self-harm in the community. Six per cent of adolescents in the schools' survey reported having selfharmed in the previous 12 months. While 30% of those that died by suicide were girls, 78% of people presenting to the ED for self-harm and 78% of community self-harm individuals were girls. Of the 12-17 year olds, those aged 15-17 comprised 78% of the suicide group, 74% of the ED self-harm group, and 51% of the community self-harm group. There is a need for both well-resourced community and hospital-based mental health services for adolescents, and greater investment in schools-based prevention.

# Published research - area level characteristics

Manchester Self-Harm data was used to examine the association between Manchester self-harm rates and area characteristics, e.g. deprivation, fragmentation and their constituent parts, in the general population (Lin et al., 2019). There was a positive association between area self-harm rates and the proportion of people in the general population of that area who were privately renting, living in lone-parent households, unemployed, living with limiting long-term illness or were of White British ethnicity. There was a negative association between self-harm rates and the travel distance to the nearest hospital ED, i.e. the closer a population lived to the ED, the higher the ED presenting self-harm rate. Area-level characteristics explained 80% of the variability in area self-harm rates. These findings have implications for allocating prevention and intervention resources targeted at high-risk groups in high self-harm rate areas, e.g. tackling the causes and consequences of joblessness, better treatment of long-term illness and the consideration of the accessibility of health services. If someone does not attend the ED after self-harm because it is geographically too distant, this is a lost-opportunity for the patient to receive immediate and longer-term help.

# 3.4 Ethnicity

**Table 9:** Ethnicity of individuals who self-harm, 2012 to 2016, and general Manchester population figures

Ethnicity	Self-harm individuals <sup>1</sup> N=11,264 (%)	Manchester self-harm individuals <sup>2</sup> N=7,124 (%)	Manchester population <sup>3</sup> N=477,397 (%)
White	9,390 (83%)	5,733 (80%)	318,228 (67%)
South Asian & Chinese <sup>4</sup>	689 (6%)	524 (7%)	81,881 (17%)
Mixed	407 (4%)	298 (4%)	21,716 (5%)
Black	351 (3%)	275 (4%)	41,137 (9%)
Other	427 (4%)	294 (4%)	14,436 (3%)
Total	11,264 (100%)	7,124 (100%)	477,397 (100%)

 $<sup>^{\</sup>rm 1}$  All people presenting to Manchester EDs with self-harm, regardless of residential location

Table 9: The ethnic composition of Manchester residents who present to the ED with self-harm was very similar to those of non-Manchester residents who present to the ED with self-harm.

A larger proportion of those who presented for self-harm were in the White or 'other' ethnic categories compared to the overall Manchester population.

Table 10: Ethnicity by gender, 2012 to 2016

Ethnicity	Female N=6,328 (%)	Male N = 4,936 (%)
White	5,163 (82%)	4,227 (86%)
South Asian	409 (6%)	227 (5%)
Chinese	35 (0.6%)	18 (0.4%)
Mixed	266 (4%)	141 (3%)
Black	222 (4%)	129 (3%)
Other	233 (4%)	194 (4%)

Table 10: There were higher proportions of women in the South Asian, Chinese, mixed heritage and Black ethnic groups, than in the White and other ethnic groups.

# Published research - impact of recession

Multicentre Study of Self-Harm data were combined with employment statistics, and self-harm rates were found to have risen following the onset of the UK recession, but only where unemployment increased (Hawton et al., 2016). A higher proportion of the self-harm sample were unemployed from 2008 onwards compared to the preceding years. There were increases in the number of self-harm episodes that had the precipitating problems of employment problems, money worries and housing problems. Such problems were found in both the employed and unemployed, suggesting that access to sickness and disability welfare benefits may have been an issue. These factors have implications for clinicians assessing at risk patients and for broader non-clinical prevention measures.

<sup>&</sup>lt;sup>2</sup> Manchester residents presenting to Manchester EDs with self-harm

<sup>&</sup>lt;sup>3</sup> Average annual Manchester population age 6 and over (ONS, 2018)

<sup>&</sup>lt;sup>4</sup> The South Asian category includes people of Indian, Pakistani and Bangladeshi ethnicity, and is combined with the Chinese category due to ONS data availability.

# 3.5 Employment status

Table 11a: Employment status, 2012 to 2016

Employment status	Female N=3,965 (%)	<b>Male</b> N = 3,046 (%)	<b>Total</b> N=7,011 (%)	Female: male ratio
Unemployed	1,546 (39%)	1,645 (54%)	3,191 (46%)	48:52
Student	1,229 (31%)	469 (15%)	1,698 (24%)	72:28
Employed	849 (21%)	751 (25%)	1,600 (23%)	53:47
Retired	100 (3%)	106 (3%)	206 (3%)	49:51
Homemaker /carer	143 (4%)	6 (0.2%)	149 (2%)	96:4
Registered sick	85 (2%)	56 (2%)	141 (2%)	60:40
Other	13 (0.3%)	13 (0.4%)	26 (0.4%)	50:50

Table 11a: A higher proportion of men who presented to the ED with self-harm were unemployed, compared to women. A higher proportion of women and girls who present to the ED with self-harm were students, homemakers or carers compared to men and boys.

Almost three-quarters (72%) of students, almost two-thirds (60%) of those registered sick and almost all (96%) homemakers/carers who present to the ED with self-harm were women or girls.

Of the unemployed, 12% had been unemployed for 26 weeks or more, 9% for less than 26 weeks, but the duration of unemployment was unrecorded for the remaining 79%.

Data availability: Until 2009, we only collected employment status data for episodes resulting in a psychosocial assessment. Between 2009 and 2016, annual data completeness for employment status is between 80 to 93%.

Figure 4: Half of the individuals in the sample were unemployed at their index presentation. Up to a quarter of people in the sample each year were students, and an increasing proportion of ED self-harm presenters were students. Up to a quarter of people each year were in employment at the time of their self-harm. Only a small proportion were retired (3%), registered sick (2%), or a homemaker or carer (2%). The proportion of our sample who were homemakers or carers decreased over time.

Figure 4: Employment status of individuals who self-harm, 2009 to 2016 (N=13,218)

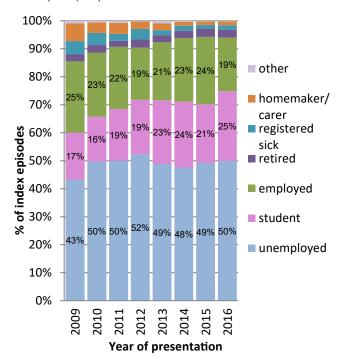


Table 11b: Employment status, 2012 to 2016

Employment status	Received a psychosocial assessment N=5,966 (%)	Did not receive a psychosocial assessment N = 5,052 (%)
Unemployed	2,644 (44%)	2,161 (43%)
Employed	1,693 (28%)	1,046 (21%)
Student	1,154 (19%)	1,471 (29%)
Retired	182 (3%)	165 (3%)
Homemaker /carer	147 (2%)	91 (2%)
Registered sick	117 (2%)	91 (2%)
Other	29 (0.5%)	27 (0.5%)

Table 11b: Those who received a psychosocial assessment were more likely than those who did not to be employed (28% vs. 21%) and were less likely to be a student (19% vs. 29%).

# 3.6 Precipitating problems

Until 2013, we only collected data on problems precipitating episodes of self-harm for episodes resulting in a psychosocial assessment. Between 2012 and 2016, annual data completeness for this variable ranges between 53 and 80%.

Research has shown that the problems precipitating a person's self-harm can vary from one episode to their next episode (Horne et al., 2008). Therefore in this section, the results are shown for all episodes, not just index episodes.

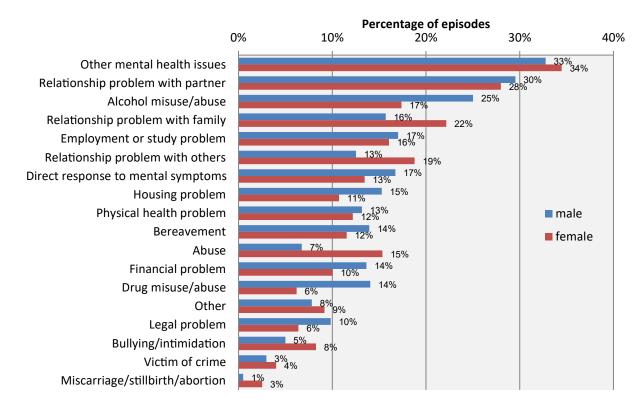
Between 2012 and 2016, precipitating problems were recorded for 14,548 (73%) episodes, including 9,307 (98%) episodes where the patient received a psychosocial assessment, and 5,241 (50%) episodes where the patient did not receive a psychosocial assessment.

Two-thirds (63%) of episodes had more than one precipitating problem recorded.

Figure 5: The most frequent precipitating factor for both males and females was 'other' mental health issues e.g. depression (females 34%, males 33%), followed by relationship problems with a partner/ex-partner (female 28%, male 30%).

Females were more likely than males to cite abuse (physical, mental or sexual) (15% vs. 7%), relationship problems with family (22% vs. 16%) and relationship problems with others (19% vs. 13%) as problems that precipitated self-harm. Men were more likely than women to cite alcohol misuse (25% vs. 17%), drug misuse (14% vs. 6%), a direct response to mental health symptoms e.g. hearing command hallucinations (17% vs. 13%), housing problems (15% vs. 11%), financial problems (14% vs. 10%) and legal problems (10% vs. 6%) as precipitants to their self-harm.

Figure 5: Precipitants of self-harm by gender, 2013 to 2016 (female N=6,994, male N=5,360)



# 4. Clinical Characteristics

# Current and previous mental health treatment<sup>3</sup>

Until 2013 we collected data on patients' current and previous mental health treatment history only for episodes which resulted in an assessment. Since then we have collected this on all episodes, where recorded. However, while this was recorded in 86% of index episodes receiving a psychosocial assessment, it was recorded in only 10% of those not receiving a psychosocial assessment. Therefore the following results are based only on index episodes that resulted in a psychosocial assessment.

Whether or not a patient was already receiving mental health treatment was known in 90% of those index episodes. Of these, 64% were already under current mental health treatment. A further 16% were not under current mental health treatment but had been previously.

Where known, 1% of index episodes were by current mental health in-patients, and 22% were by current mental health out-patients.

# 4.1 Repetition of self-harm

# Percentage of repeat episodes<sup>4</sup>

**Table 12**: Index and repetition episodes within each year, 2012 to 2016

Index or repetition	Y	Year of presentation N (%)				
episode	2012	2013	2014	2015	2016	Average
First episode	3116 (75%)	3019 (74%)	2935 (75%)	2688 (77%)	3019 (75%)	2991 (75%)
within year						
Subsequent episode(s) within year	1053 (25%)	1065 (26%)	964 (25%)	864 (23%)	1014 (25%)	992 (25%)
Total	4169	4084	3899	3732	4033	3983

Table 12: Between 2012 and 2016, 12,393 individuals presented with 19,917 episodes of self-harm. Between 1st January 2012 and 31st December 2012, 3,116 individuals presented with 4,169 episodes of self-harm. The proportion of episodes which were by people who had already presented with self-harm earlier that year remained stable between 2012 and 2016. The proportion of these repetition episodes each year was similar in men and women.

Between 1<sup>st</sup> January 2012 and 30<sup>th</sup> June 2016 (allowing all individuals a six month follow up period), 11,304 individuals presented with self-harm. 13% re-presented with another self-harm episode within 6 months of the first episode, in both men and women.

# 12 month repetition rate<sup>3</sup>

Between 1<sup>st</sup> January 2012 and 31<sup>st</sup> December 2015 (allowing all individuals a 12 month follow up period), 10,123 individuals presented with self-harm. 18% of individuals represented with another episode of self-harm within 12 months of the first episode, 18% of men and 19% of women.

# Self-reported previous self-harm<sup>3</sup>

**Table 13:** Self-reported previous self-harm by gender, 2012 to 2016

	Male N=2,707 (%)	Female N=3,404 (%)
Any previous self-harm	1,797 (66%)	2,378 (70%)
Self-harm within last 12 months <sup>1</sup>	1,022 (37%)	1,306 (38%)
Self-harm more than 12 months ago <sup>1</sup>	763 (28%)	1,044 (31%)

<sup>1</sup> Self-harm within the last 12 months and self-harm more than 12 months ago are mutually exclusive categories, i.e. if a person self-harmed both within the last 12 months and over 12 months ago, they are recorded here as having self-harmed in the last 12 months.

Information on self-reported previous self-harm was available for 95% (6,111) of index episodes receiving a psychosocial assessment. Two-thirds (68%) of those individuals stated that they had a history of self-harm prior to the current episode, for which they may or may not have sought medical treatment, including 38% reporting they had self-harmed in the previous year.

<sup>6</sup> month repetition rate<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> These figures are based on an individual's index episode, i.e. first episode within the relevant time period.

<sup>&</sup>lt;sup>4</sup> These figures are based on all episodes within the relevant time period, not just index episodes.

# 4.2 Alcohol and drug misuse<sup>5</sup>

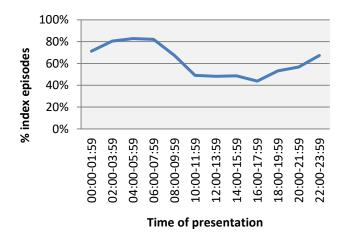
# Alcohol consumption, misuse and dependence

Details regarding whether or not alcohol was consumed around the time of self-harm were available for 73% (4,933) of all index episodes receiving an assessment by ED or mental health staff, but in less than half of index episodes not receiving an assessment. This high level of missing data prevents us from determining how representative these results are for non-assessed episodes. Therefore non-assessed episodes are excluded from the analysis for this variable.

Almost two-thirds (62%) had consumed alcohol within 6 hours of the self-harm episode (67% of men and 58% of women). Alcohol was more likely to have been consumed by those presenting on a weekend (68%) than by those presenting on a weekday (59%).

Figure 6a: ED self-harm presentations where alcohol had been consumed were at their highest between 2am and 8am and lowest between 10am and 6pm.

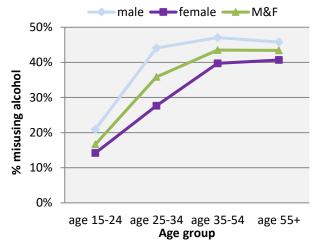
**Figure 6a:** Alcohol consumption and time of ED presentation, 2012 to 2016 (N=4,925)



Details of alcohol misuse in general were recorded for 73% (4,984) of index episodes receiving a psychosocial assessment. Alcohol misuse is defined as harmful use as regarded by the mental health specialist. Alcohol dependence is included within our alcohol misuse figures. Overall, 32% of individuals were defined as currently misusing alcohol (39% of men and 26% of women).

Figure 6b: Alcohol misuse was more common among men than women across all age groups, and was highest in men aged 35-54 (47%), and women aged 55+ (41%).

**Figure 6b:** Alcohol misuse in individuals who self-harm by gender and age group, 2012 to 2016 (male N=2,271; female N=2,668)



### Drug use & misuse

Details of drug use/misuse were recorded for 75% (5,086) of index episodes which received a psychosocial assessment. Drug use/misuse is defined in these figures as use on a regular basis or it was classified as harmful use by the mental health specialist. Drug dependence is included within our drug misuse figures. The following figures exclude all episodes where drug misuse information was missing or not known.

Drug use/misuse was less common than alcohol misuse. A quarter (24%) of individuals were identified as currently using/misusing drugs, 34% of men and 16% of women. Figures were slightly higher than in 2010-2011, which were 20% overall, 30% of men and 12% of women (Bickley et al., 2013).

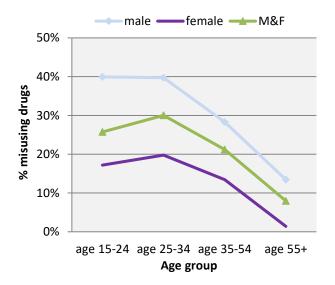
Figure 6c: In contrast to alcohol misuse, drug use/misuse was more common in those aged under 35. 40% of men aged 15-24 and 25-34, 17% of women aged 15-24 and 20% of women aged 25-34 were using/misusing drugs.

# Published research - high volume repetition

Using Multicentre Study of Self-Harm data, people who repeatedly self-harmed, the 'high-volume repeaters', were studied. These were defined as those attending the ED with self-harm at least 15 times within a four-year period (Ness et al., 2016). Only 0.6% of people who presented to the ED with self-harm were high-volume repeaters, but they accounted for 10% of all self-harm presentations to the ED. All high-volume repeaters had temporal clusters of attendance. High-volume repeaters were more likely than low-volume repeaters to die from external causes. The higher number of episodes, clustering of episodes and higher mortality rate in this group indicate the need for early intervention.

<sup>&</sup>lt;sup>5</sup> These figures are based on an individual's index episode, i.e. first episode within the relevant time period.

**Figure 6c:** Drug misuse in individuals who self-harm by gender and age group, 2012 to 2016 (male N=2,356; female N=2,688)



# 4.3 Premeditation and suicidal intent6

For those that received an assessment in the ED or by mental health staff, detailed information on the circumstances of the self-harm was available, such as whether their self-harm was premeditated, whether they had tried to avoid discovery, whether they had wanted to die at the time of their self-harm and whether they left a suicide note, text message or similar.

For index episodes resulting in an assessment, the above information was recorded in the assessment data of between 75% and 85% of individuals, depending upon the variable.

One-tenth (12%) of individuals preplanned their self-harm, e.g. sourcing the means to self-harm in advance, 14% tried to avoid discovery of their self-harm by others, e.g. intentionally timing their self-harm act for when other people were not around, 58% had reported wanting to die and 9% left a suicide note. These results were similar across both index presentations and all presentations of self-harm.

Manchester Self-Harm data was combined with mortality data to investigate the role of hopelessness as a risk factor for repeat self-harm and suicide (Steeg et al., 2016). Hopelessness was found to be a risk factor for repetition of self-harm within 12 months of a self-harm episode and for suicide. For people who were living alone, homeless, unemployed, had reported problems with housing, were currently or previously under the care of mental health services, or had used alcohol during the self-harm episode, their already elevated risk was increased if they had additionally been assessed as experiencing hopelessness. Those who had presented with legal, physical health or bereavement issues were only at increased risk if they had also been assessed as experiencing hopelessness. Hopelessness intensified the impact of other known risk factors, and feelings of hopelessness need addressing in the psychosocial assessment and in subsequent care.

### Published research – suicide risk

The Multicentre Study of Self-Harm conducted a longerterm follow-up of self-harm patients and whether they later died by suicide (Geulayov et al., 2019). Suicide incidence peaked in the first-year and first-month postdischarge after ED self-harm presentation, so early follow-up after discharge is important in suicide prevention. Men were three times more likely than women to die by suicide after an ED self-harm presentation. Suicide risk increased with age; for each 1 year increase in age, the risk of suicide increased by 3%. Eventual suicide was more likely in people who had previously presented with both self-poisoning and selfinjury within an episode, or self-injury alone, than those presenting with self-poisoning alone. Self-harm acts using hanging/asphyxiation or traffic-related methods had a greater risk of later suicide than other methods. After adjusting for age, gender, previous self-harm and mental health treatment, those living in the least deprived areas were more likely to later die by suicide than those living in the most deprived areas.

# Published research - analgesics

When Multicentre Study of Self-Harm data was combined with mortality data, the case fatality was found to be higher for some analgesics than others (Hawton et al., 2019). Therefore care when prescribing analgesics is needed, especially for people at risk of self-harm.

**Published research - hopelessness** 

<sup>&</sup>lt;sup>6</sup> These figures are based on an individual's index episode, i.e. first episode within the relevant time period, unless otherwise stated.

# 5. Self-Harm Methods, Timing and Hospital Management

# 5.1 Method of harm

Method of harm was recorded for 19,906 (99.9%) episodes. Where a self-harm episode involved more than one method, the primary and secondary methods were included in analysis unless otherwise stated. Primary and secondary methods of harm were prioritized in the following order: self-injury excluding cutting/stabbing; self-poisoning by drugs; other self-poisoning (e.g. consuming bleach or weed killer); and self-injury by cutting/stabbing.

**Table 13:** Primary method of self-harm in all episodes by gender, 2012 to 2016

	Females N=11,258 (%)	Males N=8,644 (%)	Total N= 19,902 (%)
Self- poisoning by drugs	7,687 (68%)	5,514 (64%)	13,201 (66%)
Self-cutting or stabbing	2,314 (21%)	1,744 (20%)	4,058 (20%)
Other self- injury	1,140 (10%)	1,272 (15%)	2,412 (12%)
Other self- poisoning	117 (1%)	114 (1%)	231 (1%)

Table 13: The most common primary method of self-harm was self-poisoning with drugs (66%), followed by self-cutting/stabbing (20%). Women and girls were more likely than men and boys to self-harm by self-poisoning (68% vs. 64%). These results are similar to those in our previous report (Bickley et al., 2013).

Figures 7a & 7b: The proportion of episodes with a primary method of self-poisoning by drugs has slightly decreased in males and females between 2012 and 2016. The proportion of episodes where self-cutting/stabbing was used differed between males and females over time; percentages in males rose to a peak in 2014 and then decreased; percentages in females rose, decreased then rose again. Self-injury excluding self-cutting/stabbing showed similar trends in males and females; both decreased between 2012 and 2015 then rose in 2016.

Figure 7a: Primary method of self-harm by type, males, 2012 to 2016 (N=8,644)

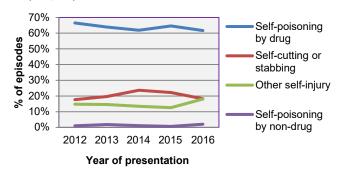
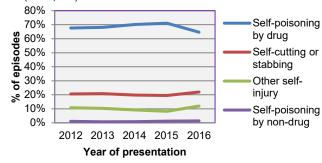


Figure 7b: Primary method of self-harm by type, females, 2012 to 2016 (N=11,258)



**Figure 7c**: Primary method of self-harm by age group, males, 2012 to 2016 (N=8,641)

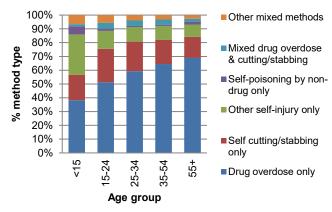
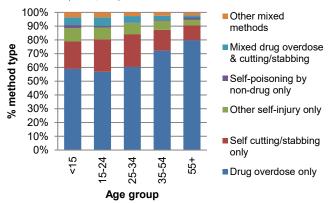


Figure 7d: Primary method of self-harm by age group, females, 2012 to 2016 (N=11,257)



Figures 7c & 7d: In a minority of episodes (8%), more than one method of self-harm was used. In both men and women, the largest categories were drug overdose alone, followed by

self-cutting/stabbing alone and other self-injury alone. In males, there was a gradual increase in the use of drug overdose with age. In women, 15-24 year olds were the least likely to use drug overdose on its own as a method, and with increasing age came an increasing likelihood of using this method.

In both men and women, those aged 15-24 and 25-34 were the most likely to use self-cutting/stabbing as a method of self-harm. In both males and females, the youngest age groups were the most likely to use self-injury (excluding cutting/stabbing) on its own. The group most likely to self-poison by a non-ingestible substance (e.g. bleach, weed-killer) were boys younger than 15. In both men and women, those in the oldest age groups were least likely to use mixed methods of harm.

**Table 14:** Methods of self-harm in all episodes by gender, 2012 to 2016: Other self-injury

	Total N=2,412 (%)	Males N=1,272 (%)	Females N=1,140 (%)
Hanging / strangulation	687 (28%)	399 (31%)	288 (25%)
Hit self or something	289 (12%)	186 (15%)	103 (9%)
Traffic related	274 (11%)	169 (13%)	105 (9%)
Head banging	265 (11%)	146 (11%)	119 (10%)
Jumping from height	244 (10%)	143 (11%)	101 (9%)
Swallowing foreign body	154 (6%)	31 (2%)	123 (11%)
Burning self	149 (6%)	59 (5%)	90 (8%)
Drowning	76 (3%)	46 (4%)	30 (3%)
Interference with wound healing	74 (3%)	16 (1%)	58 (5%)
Shooting self	6 (0.2%)	5 (0.4%)	1 (0.1%)
Other	194 (8%)	72 (6%)	122 (11%)

<sup>&</sup>lt;sup>7</sup> These figures are based on all episodes within the relevant time period, not just index episodes.

Table 14: Among episodes involving self-injury (excluding cutting/stabbing), the most common form of self-injury was hanging/strangulation (28%).

Men and boys were more likely than women and girls to use self-injury (excluding cutting/stabbing) (15% vs. 12%). In particular, men were more likely to use hanging/strangulation, hitting an object/themselves or traffic related means. Women were more likely to swallow foreign objects, burn themselves or interfere with wound healing.

# 5.2 Drugs taken in self-poisoning

The following data include episodes where the primary or secondary method was self-poisoning. Two-thirds (68%, 13,483) of all episodes involved self-poisoning with drugs. Multiple drugs were taken in some self-harm episodes.

The type of drug(s) taken were known for 97% (13,105) of overdose episodes.

More than half (61%) of self-poisoning episodes involved the use of analgesics. Where analgesics were taken, three quarters (6085, 76%) involved the use of paracetamol/paracetamol compounds, accounting for 45% of self-poisoning episodes.

Figure 8: Drugs used in overdose episodes by gender, 2012 to 2016 (male N=5,490; female N=7,611)<sup>7</sup>

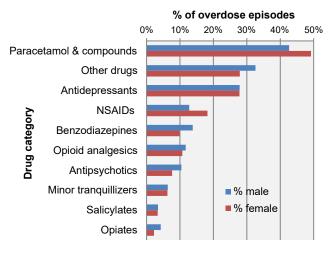
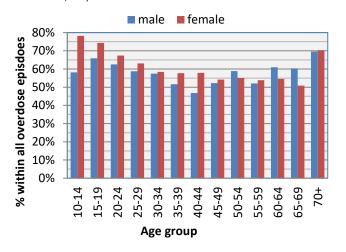


Figure 8: Drugs other than analgesic and psychotropic medication were included in the 'other drugs' category, which also included street drugs. Paracetamol/paracetamol compounds were the most commonly taken category of drugs, followed by 'other drugs' (30%), antidepressants (28%) and NSAIDs (non-steroidal anti-inflammatory drugs) (16%). Opioid analgesics were used in 11% of all overdose episodes.

Women and girls were more likely than men and boys to take paracetamol or paracetamol compounds as part of an overdose (49% vs. 43%), and non-steroidal anti-inflammatory drugs (NSAIDs) (18% vs. 13%). Men and boys took 'other' drugs in overdose more often than women and girls (33% vs. 28%), as well as benzodiazepines (14% vs. 10%), antipsychotics (10% vs. 8%) and opiates (4% vs. 2%).

Figure 9: Those aged under 25 and over 70 were the most likely to overdose using analgesics. In all age categories under the age of 50, there was a higher proportion of overdose episodes involving analgesics in women and girls than there were in men and boys. Men were slightly more likely than women to overdose using analgesics in age categories 50-54, 60-64 and 65-69.

**Figure 9:** Percentage of self-poisoning episodes involving analgesics, by gender and age group, 2012 to 2016 (male N=5,482; female N=7,603)



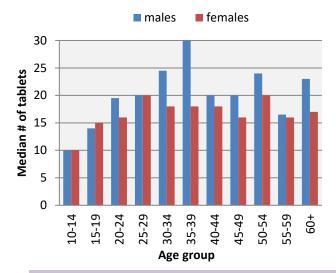
Number of tablets taken in overdose episodes involving paracetamol/paracetamol compounds

**Table 15:** Number of paracetamol/paracetamol compound tablets taken in overdose, by gender, 2012 to 2016

	Total N=5,280	Males N=2,024	Females N=3,255	
Median	16	20	16	
Mean	24	28	21	
Minimum*	1	1	1	
Maximum	380	380	288	
* taken as part of multi-drug overdoses				

Table 15: On average, men took slightly more paracetamol/paracetamol compound tablets than women (median 20 vs. 16). Figure 10: This was found in most age groups. Exceptions were those aged 10-14 and 25-29, where males and females had the same median scores, and age 15-19, the only group where women had a higher median score than men.

**Figure 10:** Median number of tablets taken for self-poisoning episodes involving paracetamol compounds, by gender and age group, 2012 to 2016 (male N=2,023; female N=3,254)



# Published research - overdose drugs

The Multicentre Study of Self-Harm looked at mortality associated with benzodiazepine and hypnotic medication overdoses (Geulayov et al., 2018b), and mood stabiliser and antipsychotic overdoses (Ferrey et al., 2018). Overdoses of some drugs were more likely to be fatal than others. Therefore cautious prescribing is important, especially for people at risk of self-harm and/or suicide, and non-pharmacological treatments should also be considered.

# Published research – methods of self-harm

The Multicentre Study of Self-Harm found 75% of self-harm episodes between 2003 and 2012 were by self-poisoning, 21% were by self-injury and 4% were a combination of self-poisoning and self-injury (Geulayov et al., 2016). There had been a large increase in self-injury since 2007, especially self-cutting, hanging and jumping from a height. This is concerning because hanging and self-cutting both carry an increased suicide risk (Bergen et al., 2012). However, those who self-cut were significantly less likely to receive a psychosocial assessment by specialist mental health staff than those who self-poisoned (34% vs 66%) (Geulayov et al., 2016). 46% of self-poisoning episodes involved analgesics, 25% antidepressants and 14% benzodiazepines.

# Published research – visible versus concealed locations of self-cutting

Manchester Self-harm data was used to compare the characteristics of young patients who self-cut in concealed versus visible locations of their body (Gardner et al., 2020). 40% of those aged 15-24 who self-cut, cut in a concealed location. Those cutting in a concealed location were more likely than those cutting in a visible location to have reported abuse as a precipitating problem to their self-harm, to have self-reported previous self-harm, to be currently receiving mental health care, and to have preplanned their self-harm. Those who self-cut in a concealed location were less likely to then receive a psychosocial assessment than those cutting in a visible location. All young people presenting to the ED with self-harm should receive a psychosocial assessment.

# Published research – suicide risk & switching of selfharm methods

The Multicentre Study of Self-Harm combined data from Manchester, Oxford and Derby with ONS mortality statistics for people who presented to the ED with self-harm aged 10-18 (Hawton et al., 2020). Those presenting to the ED with self-harm were 30 times more likely to later die by suicide than those in the general population. This considerable increased risk of later suicide was especially common in males, older adolescents and those who repeated self-harm. The risk for suicide persists after several years.

The switching of method used in self-harm to that used in the final fatal episode was common, usually from selfpoisoning to self-injury. Self-harm was also found to be significantly associated with an increased risk of death from accidental poisoning, particularly by drug misuse, especially in young men.

# **Government self-harm & suicide documents**

In 2004, NICE published Clinical guideline [CG16] 'Self-harm in over 8s: short-term management and prevention of recurrence', followed by Clinical guideline [CG133] 'Self-harm in over 8s: long-term management' in 2011, and by the Quality Standard [QS34] on Self-Harm in 2013.

Self-harm became a key area for suicide prevention in 'Preventing Suicide in England: Third Progress Report of the Cross-Governmental Outcomes Strategy to Save Lives' (Department of Health, 2017). Progress was reported on in the Fourth progress report (Department of Health and Social Care, 2019).

# 5.3 Timing<sup>8</sup>

# Month of presentation

**Figure 11a:** Average number of self-harm episodes per day, by month of ED presentation and by gender, 2012 to 2016 (male N=8,648; female N=11,265)

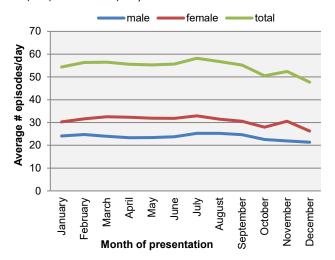


Figure 11a: The mean average numbers of self-harm presentations to the ED were stable throughout the year for women and men except for a slight decrease between October and December.

**Figure 11b:** Average number of self-harm episodes per day, by month of ED presentation and by age group, 2012 to 2016 (N=19,902)

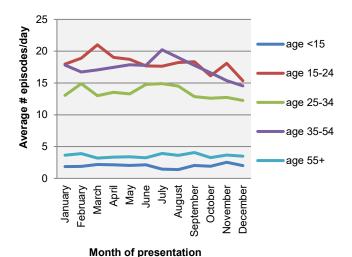


Figure 11b: The mean average number of self-harm presentations by those aged 15-24 peaked in March, mainly driven by presentations by women, and peaked in July for those aged 35-54, in both men and women.

# Day of week of presentation

Figure 12a: The number of self-harm presentations to the ED for men and women were stable throughout the week.

Figure 12a: Day of self-harm presentation by gender, 2012 to 2016 (male N=8,648; female N=11,265)

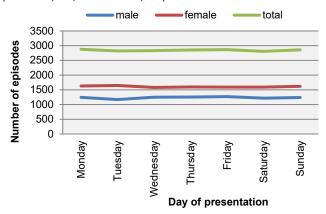


Figure 12b: Day of self-harm presentation by age group, 2012 to 2016 (N=19,898)

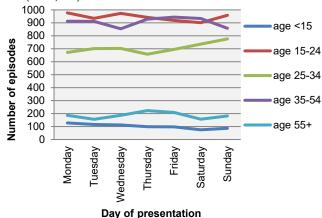
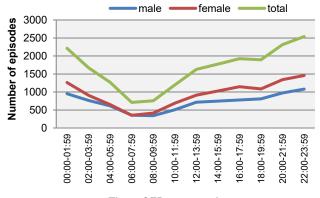


Figure 12b: Those aged 25-34, particularly men, were more likely than others to present at a weekend. Those aged 55 and over, particularly men, were more likely than others to present on a Thursday. Those younger than 15, particularly girls, were more likely than others to present on a Monday, although these numbers were relatively small.

# Time of presentation

**Figure 13:** Time of day of self-harm presentation by gender, 2012 to 2016 (male N=8,643; female N=11,248)



Time of ED presentation

<sup>&</sup>lt;sup>8</sup> These figures are based on all episodes within the relevant time period, not just index episodes.

Figure 13: The number of self-harm presentations were at their highest between 8pm and midnight (24%), and their lowest between 6am and 10am (7%). The presentation times of men and boys were similar to those of women and girls.

# 5.4 Hospital management of episodes

# Management of self-harm episodes by emergency department staff

Due to changes in the availability of hospital data since our last report, as ED staff completed fewer assessments, the proportion of episodes which could have information on multiple referrals from the ED has greatly reduced, so most episodes now only have one ED referral type assigned to their record. While we know whether a patient had a type of referral in 93% (18,463) of all episodes, we do not always know all the services they were referred to by the ED.

Episodes where the patient did not receive an assessment by ED staff, only had one disposal method recorded, so figures in any referral category, e.g. referral to mental health aftercare, may be an underestimate.

Figure 14: Receipt of an assessment (N=19,917)

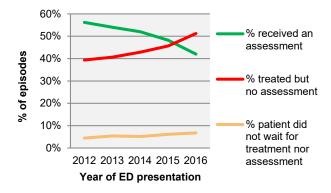


Figure 14: There has been an increase in the proportion of patients who have not waited for treatment or assessment, from 4% in 2012 to 7% in 2016. During the same period, there has been an increase in the proportion of patients being treated but not receiving an assessment.

The grade of ED staff treating the patient was known for 15,321 (77%) episodes. 84% were treated by junior doctors and 7% by consultants.

Figure 15: Due to changes in the availability of variables, Figure 15 is based upon episodes presenting to the ED between 2013 and 2016. Episodes resulting in an assessment by ED staff could have more than one referral assigned to their records, but other episodes could only have one referral assigned.

**Figure 15**: Referral of self-harm episodes by Emergency Department staff, 2013 to 2016 (N=15,423)<sup>9</sup>

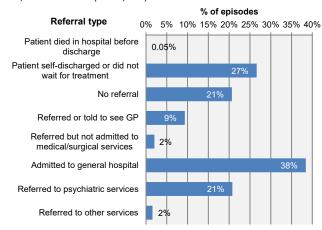


Figure 15: More than one-third (38%) of episodes resulted in admission to a hospital bed. At least 21% of episodes were referred to mental health services, although these numbers could be an underestimate.

Half (51%) of episodes resulting in a medical admission received a psychosocial assessment by a mental health specialist.

# Management of episodes by mental health specialists

Figure 16: Between 2012 and 2016, 48% (9,497) of all presentations were assessed by mental health specialists. Management by mental health specialists was known for 91% (8,676) of these episodes.

- 33% (2,876) of episodes were referred to mental health services, including outpatients, day hospital, community mental health teams, community drug and alcohol teams and mental health review
- 14% (1,216) of episodes resulted in admission to a psychiatry ward or unit; 176 (14%) of these admissions were under provision of the Mental Health Act (2007), compared to 11% in 2010-2011 (Bickley et al., 2013).
- 22% (1912) of episodes had an urgent referral, the same percentage as in 2010-2011 (Bickley et al., 2013); and again, almost all of these were to a Crisis Team (1713, 90%)
- In 4% (363) of episodes, other referrals were made, including to voluntary organisations (such as 42<sup>nd</sup> Street, a mental health charity for young people in Manchester), social services and counselling
- In 32% (2,783) of episodes, a referral to the patient's GP was the only formal referral.
- In 18% (1,612) of episodes, no referral was made (excluding referrals to GPs and excluding episodes where the patient self-discharged)

<sup>&</sup>lt;sup>9</sup> Each case may be referred to more than one service.

Half of all self-harm episodes had information available on whether the patient's GP was informed of their presentation to hospital for self-harm. Of these, the GP had been informed in 88% of episodes.

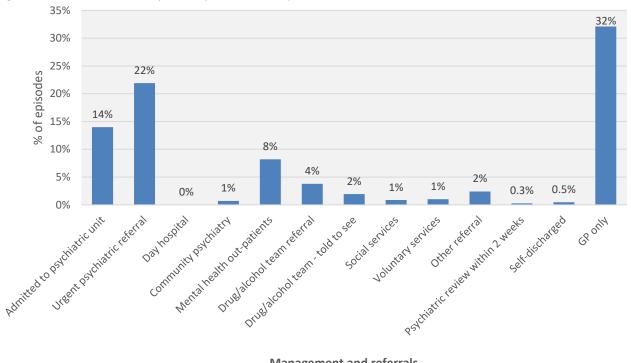


Figure 16: Referral of self-harm episodes by mental health specialists, 2012 to 2016 (N=8,723)<sup>10</sup>

Management and referrals

 $<sup>^{\</sup>rm 10}$  Each case may have been referred to more than one service.

# References

- Bergen, H., Hawton, K., Waters, K., Ness, J., Cooper, J., Steeg, S., Kapur, N. (2012) How do method of non-fatal self-harm relate to eventual suicide? Journal of Affective Disorders 136(3):526-533.
  - https://doi.org/10.1016/j.jad.2011.10.036.
- Bickley, H., Steeg, S., Turnbull, P., Haigh, M., Donaldson, I., Matthews, V., Dickson, S., Kapur, N., Cooper, J. (2013) Self-Harm in Manchester: January 2010 to December 2011. The University of Manchester.
  - http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/MaSH/reports/MASHREPORT 1011.pdf.
- Clements, C., Farooq, B., Bickley, H., Kapur, N. (2020) Exploring characteristics and risk of repetition in people who fail to report previous hospital presentations for self-harm: A case-control study using data from The Manchester Self-Harm Project. Journal of Affective Disorders 262:77-82.
  - https://doi.org/10.1016/j.jad.2019.10.052.
- Clements, C., Hawton, K., Geulayov, G., Waters, K., Ness, J., Rehman, M., Townsend, E., Appleby, L., Kapur, N. (2019) Self-harm in midlife: analysis using data from the Multicentre Study of Self-Harm in England. The British Journal of Psychiatry 215:600-607.
  - DOI: 10.1192/bjp.2019.90.
- Clements, C., Turnbull, P., Hawton, K., Geulayov, G., Waters, K., Ness, J., Townsend, E., Khundakar, K., Kapur, N. (2016) Rates of self-harm presenting to general hospitals: a comparison of data from the Multicentre Study of Self-Harm in England and Hospital Episode Statistics. BMJ Open 6(2):e009749.
  - http://dx.doi.org/10.1136/bmjopen-2015-009749.
- Department of Health (2002). National Suicide Prevention Strategy for England. The Stationary Office, London.
- Department of Health (2012). Preventing suicide in England a cross-government outcomes strategy to save lives. Department of Health, London.
- Department of Health (2017) Preventing Suicide in England: Third Progress Report of the Cross-Governmental Outcomes Strategy to Save Lives. Department of Health, UK.
  - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/582117/Suicide\_report\_2016\_A.pdf.
- Department of Health and Social Care (DHSC) (2019)
   Preventing suicide in England: Fourth progress report of
   the cross-government outcomes strategy to save lives.
   Department of Health and Social Care, UK.
  - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/772184/na

# tional-suicide-prevention-strategy-4th-progress-report.pdf.

- Ferrey, A.E., Geulayov, G., Casey, D., Wells, C., Fuller, A., Bankhead, C., Ness, J., Clements, C., Gunnell, D., Kapur, N., Hawton, K. (2018) Relative toxicity of mood stabilisers and antipsychotics: case fatality and fatal toxicity associated with self-poisoning. BMC Psychiatry 18(1):399-406. DOI: 10.1186/s12888-018-1993-3.
- Gardner, K.J., Bickley, H., Turnbull, P., Kapur, N., Taylor, P., Clements, C. (2020) The significance of site of cut in self-harm in young people. Journal of Affective Disorders 266:603-609.

# https://doi.org/10.1016/j.jad.2020.01.093.

- General Register Office for Scotland, Office for National Statistics, Census Division, Northern Ireland Statistics and Research Agency (GRO/ONS/NISRA) (2019) GeoConvert: Postcode Data, 2001 & 2011. [data collection]. UK Data Service.SN:5837
  - http://dx.doi.org/10.5257/census/geoconvert-1 [Accessed from http://geoconvert.mimas.ac.uk]
- Geulayov, G., Casey, D., Bale, L., Brand, F., Clements, C., Farooq, B., Kapur, N., Ness, J., Waters, K., Tsiachristas, A., Hawton, K. (2019) Suicide following presentation to hospital for non-fatal self-harm: a long-term follow-up study. The Lancet Psychiatry 6(12):1021-1030. http://doi.org/10.1016/S2215-0366(19)30402-X.
- Geulayov, G., Casey, D., McDonald, K.C., Foster, P., Pritchard, K., Wells, C., Clements, C., Kapur, N., Ness, J., Waters, K., Hawton, K. (2018a) Incidence of suicide, hospital-presenting non-fatal self-harm, and community-occurring non-fatal self-harm in adolescents in England (the iceberg model of self-harm): a retrospective study. The Lancet Psychiatry 5(2):167-174.
  DOI: 10.1016/S2215-0366(17)30478-9.
- Geulayov, G., Ferrey, A., Casey, D., Wells, C., Fuller, A., Bankhead, C., Gunnell, D., Clements, C., Kapur, N., Ness, J., Waters, K., Hawton, K. (2018b) Relative toxicity of benzodiazepines and hypnotics commonly used for selfpoisoning: An epidemiological study of fatal toxicity and case fatality. Journal of Psychopharmacology 32(6):654-662. DOI: 10.1177/0269881118754734.
- Geulayov, G., Kapur, N., Turnbull, P., Clements, C., Waters, K., Ness, J., Townsend, E., Hawton, K. (2016) Epidemiology and trends in non-fatal self-harm in three centres in England, 2000-2012: findings from the Multicentre Study of Self-Harm in England. *BMJ Open 6*(4): e010538. <a href="http://dx.doi.org/10.1136/bmjopen-2015-010538">http://dx.doi.org/10.1136/bmjopen-2015-010538</a>.
- Hawton, K., Bale, L., Brand, F., Townsend, E., Ness, J., Waters, K., Clements, C., Kapur, N., Geulayov, G. (2020) Mortality in children and adolescents following presentation to hospital after non-fatal self-harm in the Multicentre Study of Self-harm: a prospective observational cohort study. The Lancet Child & Adolescent Health 4(2):111-120. DOI: 10.1016/S2352-4642(19)30373-6.

- Hawton, K., Bergen, H., Geulayov, G., Waters, K., Ness, J., Cooper, J., Kapur, N. (2016) Impact of the recent recession on self-harm: Longitudinal ecological and patient-level investigation from the Multicentre Study of Self-harm in England. *Journal of Affective Disorders* 191:132-138. DOI: 10.1016/j.jad.2015.11.001.
- Hawton, K., Casey, D., Bale, E., Rutherford, D., Bergen, H., Simkin, S., Brand, F., Lascells, K. (2013) Self-harm in Oxford 2011 Annual Report. University of Oxford Centre for Suicide Research. Oxford.
- Hawton, K., Ferrey, A., Casey , D., Wells, C., Fuller, A., Bankhead, C., Clements, C., Ness, J., Gunnell, D., Kapur, N., Geulayov, G. (2019) Relative toxicity of analgesics commonly used for intentional self-poisoning: A study of case fatality based on fatal and non-fatal overdoses. Journal of Affective Disorders 246:814-819. DOI: 10.1016/j.jad.2019.01.002.
- Horne, O., Emese Csipke, E., Paul, S. (2008) Understanding self-harm. SANE, London. <a href="http://www.sane.org.uk/uploads/understanding-self-harm.pdf">http://www.sane.org.uk/uploads/understanding-self-harm.pdf</a>:
- Lin, C-Y., Bickley, H., Clements, C., Webb, R.T., Gunnell, D., Hsu, C-Y, Chang, S-S., Kapur, N. (2019) Spatial patterning and correlates of self-harm in Manchester, England. Epidemiology and Psychiatric Sciences 29,e72,1-10.

# https://doi.org/10.1017/S2045796019000696.

National Institute for Health and Care Excellence (NICE)
 (2004) Self-harm: the short-term physical and
 psychological management and secondary prevention of
 self-harm in primary and secondary care (full guideline)
 clinical guideline 16. London: National Institute for
 Clinical Excellence.

# https://www.nice.org.uk/guidance/cg16.

- Ness, J., Hawton, K., Bergen, H., Waters, K., Kapur, N., Cooper, J., Steeg, S., Clarke, M. (2016) High-Volume Repeaters of Self-Harm. *Crisis* 37(6):427-437. DOI: 10.1027/0227-5910/a000428.
- National Institute for Health & Clinical Governance (2004) Clinical guideline [CG16] 'Self-harm in over 8s: short-term management & prevention of recurrence.
   NICE,UK. <a href="https://www.nice.org.uk/guidance/cg16">https://www.nice.org.uk/guidance/cg16</a> & <a href="https://www.nice.org.uk/guidance/cg16/evidence/full-guideline-pdf-189936541">https://www.nice.org.uk/guidance/cg16/evidence/full-guideline-pdf-189936541</a>.
- National Institute for Health & Clinical Governance (2011) Clinical guideline [CG133] 'Self-harm in over 8s: long-term management. NICE, UK.

# https://www.nice.org.uk/guidance/cg133.

- National Institute for Health & Clinical Governance (2013) Quality Standard [QS34] 'Self-harm in over 8s: long-term management. NICE, UK. <a href="https://www.nice.org.uk/guidance/qs34">https://www.nice.org.uk/guidance/qs34</a>.
- Office for National Statistics (2019) MYEB1\_ detailed\_population\_estimates\_series\_UK (2001-2018). (Released 25/06/2019, Downloaded 24/01/2020) <a href="https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datase">https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datase</a>

# <u>ts/populationestimatesforukenglandandwalesscotlanda</u> ndnorthernireland

- Office for National Statistics (2018) Population denominators by broad ethnic group and for White British: local authorities in England and Wales, 2011 to 2017. (Released 27/07/2018, Downloaded 31/01/2020) <a href="https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/adhocs/008781populationdenominatorsbybroadethnicgroupandforwhitebritishlocalauthoritiesinenglandandwales2011to2017.</a>
- Royal College of Psychiatrists (2005a). Assessment following self-harm in adults. Royal College of Psychiatrists, London.
- Royal College of Psychiatrists (2005b). Better services for people who self-harm. Royal College of Psychiatrists, London
- Steeg, S., Haigh, M., Webb, R.T., Kapur, N., Awenat, Y., Gooding, P., Pratt, D., Cooper, J. (2016) The exacerbating influence of hopelessness on other known risk factors for repeat self-harm and suicide. *Journal of Affective Disorders* 190:522-528. DOI: 10.1016/j.jad.2015.09.050.

