Northern Ireland Registry of Self-Harm

Annual Report

2017/18

HSC Public Health Agency
National Suicide Research Foundation
NSRF
Department of Health | An Roinn Sláinte

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Foreword

Since the introduction of the Self Harm Registry to Northern Ireland in 2012 by the Public Health Agency (PHA) it has played a key role in information policy development and service design in terms of addressing self-harm and suicide prevention in line with the Protect Life Strategy.

Through the Registry surveillance process the PHA is able to ensure that information on presentations of self-harm episodes attending emergency departments is collected, recorded and reported upon in a standardised manner. This is a critical step in supporting efforts to better understand self-harm and reduce deaths by suicide. To date, a comprehensive report has been published which explored the initial 3 years data (2012-15), there have also been a number of peer review papers published and abstracts from the findings of the Registry have been presented in conferences across the UK, Ireland and Europe.

Data has now been collected for six full calendar years, which provides statistics over a sufficient period of time to begin analysis of trends and to highlight key issues in respect of the extent of self-harm in Northern Ireland. The purpose of this report is to enhance our understanding of the issue and the trends in self-harming behaviour in Northern Ireland. Significantly this analysis is also being used to help inform services to support the needs of those who self-harm and their families. The report also needs to be viewed in the context of the wider Protect Life Strategy, which has sought to encourage help seeking behaviour and to modernise and develop services in the statutory and non-statutory sectors.

Since the introduction of the Registry, Health and Social care has seen a range of interventions to improve the response to people in crisis presenting to our Emergency Departments. Examples include the recent establishment of a new model of mental health liaison care in the Northern Trust and the Self-Harm Intervention Project (SHIP) which offers follow up support in the community in all Trust areas across the province. More recently the Trusts have begun to explore the potential for addressing the issue in the context of the pilot “Towards zero suicide” initiative funded under the Confidence and Supply Transformation Programme, and the findings from the Registry have helped inform that debate.

This report seeks to help us understand the trends of self-harm presenting to Emergency Departments in Northern Ireland and ensure we have the ability to compare the incidence and patterns seen in Northern Ireland with other localities, to help define the scale of the issue and gain a fuller understanding of self-harm. This is a challenge given the uniqueness of the Registry and the fact that health care systems vary in different jurisdictions.

I would like to take this opportunity to acknowledge the partnership and support of National Suicide Research Foundation in relation to data analysis, technical and scientific support, the five Health and Social Care Trusts, the work of the Data Registration Officers in the data collection process, and the staff team within the PHA for the management and production of the report.

This publication will help enhance the understanding of patterns of self-harm and help define emerging trends in Northern Ireland. I believe it will also inform efforts to address self-harming behaviour, promoting positive mental health, as well as recognising the wider social determinants of wellbeing. I am convinced that if we continue to work in partnership with our key stakeholders we will bring about tangible benefits for those individuals who self-harm, their families and carers.

Brendan Bonner

Assistant Director of Public Health (Health Improvement)

Chair of the Self-harm Registry Steering Group

1.0 Executive Summary

This is the fourth regional report from the Northern Ireland Self-Harm Registry. The most recent report covered the period 2012-2015 and this report builds on previous work and includes annual data up to the end of March 2018. The National Self-Harm Registry Ireland has been operating in the Republic of Ireland since 2002, via the National Suicide Research Foundation. Under the Northern Ireland Suicide Strategy "Protect Life – A Shared Vision", the Registry was piloted in the Western Health & Social Care Trust area from 2007. Building upon the success of this pilot, the Registry was implemented across all five Health and Social Care Trusts, with effect from 1st April 2012.

The Public Health Agency (PHA) submits quarterly returns to the Department of Health (DoH) which collates Emergency Department (ED) data on self-harm in each Trust area. This publication covers a 12 month period, building upon the previous reports, allowing for comparisons to be drawn. However, this short period does not allow for the analysis of long-term trends at this point.

During 2017/18, acts of self-harm and ideas of self-harm or suicide accounted for 13, 911 attendances to the ED. This represents almost 2% of all ED attendances during 2017/18. This highlights the importance of ED staff being skilled in carrying out preliminary assessments and having good referral pathways in place with mental health services to ensure that people with self-harming behaviour, or at risk of self-harm or suicide, are offered referral for a psychosocial assessment by trained mental health professionals. This report identifies that a referral for specialist assessment is made by ED staff in the majority of these attendances (81% of self-harm attendance and 90% of ideation attendances). The true figures may be higher as there may be a need to prioritise physical health care in some cases and referrals may be made from locations other than the ED. This data highlights the importance of having adequately resourced mental health services that are able to respond to the demand that presents to the EDs.

While it is important to respond appropriately to people with self-harm who present to the ED, it is also important that people with self-harm who present to other services are managed appropriately and that pathways are in place to ensure the person receives the right level of support.

It is also crucial that there is a focus on preventing self-harm occurring in the first place and ensuring that there are a range of preventative services accessible in schools and communities to promote positive mental health and wellbeing and early detection of problems.

Data in relation to self-harm and ideation will be presented separately below. The data focuses on presentations made during 2017/18 and highlights longer term trends where possible.

1.1 Key findings

1.1.1 Self harm

Self-harm presentations

- For the period from 1st April 2017 to 31st March 2018, the Registry recorded 9,127 self-harm presentations to EDs in Northern Ireland, made by 6,107 individuals. This reflects a 4% rise on 2016/17 and a 10% increase since 2012/13.
- There were 4,794 (53%) female presentations and 4,333 (47%) male presentations. The ratio of female to male presentations has increased slightly over the period 2012/13 to 2017/18.

- In 2017/18 the Royal Victoria Hospital in Belfast recorded the highest number of presentations over the 12 month period, accounting for 17% (n=1,507) of total presentations, followed by Altnagelvin Hospital with a 15% share (n=1,334) and the Antrim Hospital with 14% (n=1,256) of presentations.
- The largest number of self-harm presentations were recorded in the Belfast HSCT area (n=2,683; 29%), despite Belfast Trust residents making up only 19% of the population of Northern Ireland.
- During 2017/18, an average of 25 presentations involving self-harm were recorded per day.
- There was an increase in the frequency of self-harm attendances over the course of the day. The peak for males was 1am and for females was 11pm. Almost half (47%) of all self-harm presentations occurred between the hours of 10pm until 9am.
  The majority (67%) of presentations were brought to hospital by emergency services (e.g. ambulance and police).

Methods of self-harm

- In 2017/18 the most common method of self-harm was drug overdose, which was involved in almost two-thirds (64%) of all self-harm presentations. Self-cutting was also a common method of self-harm, present in almost one-third (30%) of all presentations.
- While rare as a sole method of self-harm, alcohol was involved in 44% of all self-harm presentations.
- Attempted drownings accounted for 4% of all self-harm presentations across the region. This varied by trust area from 1% in BHSCT to 14% in WHSCT.
- There have been some changes in methods of self-harm during the period 2012/13 to 2017/18. The proportion of cases involving drug overdose has reduced from 75% to 64% during this period while the proportion of cases involving self-cutting has increased from 23% to 30%. The proportion involving attempted drowning has increased from 1% to 4%.
- The proportion of cases where alcohol was involved in the act of self-harm has fallen from 51% in 2012/13 to 44% in 2017/18.

Recommended next care following self-harm

- In 2017/18, 40% of self-harm presentations resulted in admission to a general ward in the presenting hospital. A further 6% resulted in admission to a psychiatric ward.
- Almost half (47%) of self-harm cases were discharged from ED following treatment.
- In 3% of presentations the patient left the ED without being seen and a further 4% left the ED before a next care recommendation could be made. In 1% of presentations, the patient refused admission, as recommended by the presenting hospital.
- Admission to a general ward in the presenting hospital was most common following presentations involving intentional drug overdose (51%) and was least common for patients who presented with self-cutting (20%).
- Patients were most likely to leave the ED without being seen/ before a next care recommendation when the presentation involved attempted drowning (10%), self-cutting (9%) and where alcohol was involved (9%).
- The proportion of patients who left the ED without being seen varied from 1% in the South Eastern HSCT to 6% in the Belfast HSCT.

- There have been some changes in the patterns of care following ED attendance with self-harm over the period 2012/13 to 2017/18. Admission to a general hospital decreased from 58% to 40% while discharge following treatment in the ED increased from 27% to 47%. This may be associated with the changing patterns in the methods of self-harm presenting to the ED noted above.

Repetition of self-harm

- Of the 6,107 individuals, 1,305 (21%) made at least one repeat presentation to hospital with self-harm during the 12 months of 2017/18. Repetition rates have been stable at around 21% over the period 2015/16 to 2017/18 but show a slight increase from the baseline of 19% documented in 2012/13.
- In 2017/18 repetition rates ranged from 19% in the South Eastern HSCT to 23% in Belfast and Western Trust areas.
- Repetition was most common following self-cutting (27%) and attempted drowning (26%).

Self-harm among under 18s

- Self-harm presentations by those under 18 years of age contributed to 12% (n=1,096) of all presentations during 2017/18. The majority of these self-harm presentations were female (77%).
- Respectively, alcohol was involved in 23% and 14% of young male and female self-harm presentations.
- Drug overdose was the most common method of self-harm used by those aged under 18 (60%). Over the period 2012/13 to 2017/18 the proportion of self-harm attendances involving drug overdose has decreased by 11% while there has been an increase in the proportion of cases involving self-cutting (+6%), attempted drowning (+2%) and attempted hanging (+2%).
- In 2017/18 admission to a general ward following presentation with self-harm occurred in 41% of self-harm presentations made by young people under 18 years. A further 2% were admitted to a psychiatric ward. A small proportion (2%) left the ED without being seen and <1% left before a decision was made regarding their next care. Over the period 2012/13 to 2017/18 there was a reduction in the proportion of cases admitted to the general hospital (from 52% to 41%) while there was an increase in the proportion who were treated and discharged from the ED (41% to 55%).

Key subgroups

- Approximately 6% (n=587) of presentations involved persons who were homeless at the time of attendance. Approximately half of these were male (53%) and 49% presented to hospitals in the Belfast HSCT.
- Approximately 1% (n=73) of presentations recorded by the Registry were made by persons who were in prisons at the time of the self-harm act.
- A total of 95 presentations (1%) were made by residents of residential childrens' homes.
- A minority of presentations (n=79; 0.9%) were made by persons residing in acute or psychiatric hospitals.

Self-harm rates

- The overall age-standardised rate of self-harm in 2017/18 for Northern Ireland was 346 per 100,000 – 337 per 100,000 for males and 356 per 100,000 for females.
- Across the period April 2017 to March 2018, the highest rate of self-harm in Northern Ireland was observed among 15-19 year-old females and 20-24 year-old males, with peak rates of 1,184 per 100,000 for females and 909 per 100,000 for males in these age groups.
- For both males and females` the highest rates of self-harm were observed in the Belfast HSCT area (467 and 456 per 100,000, respectively); 39% and 28% higher than the male and female rates for Northern Ireland, respectively.
- The lowest rate of self-harm for both male and female residents were recorded in the Southern HSCT area, where the male rate (264 per 100,000) was 22% lower than the regional male rate, and the female rate (298 per 100,000) was 16% lower than the regional female rate.
- The rate in 2017/18 was 4% higher than in 2012/13 (334 per 100,000). There was relatively no change in the male rate of self-harm during this period (+<1%), however the female rate increased by 7%.
- Between 2016/17 and 2017/18 the rate of self-harm increased by 3% (2% for males and 4% for females). The rate of self-harm increased in the South Eastern, Western and Belfast HSCT areas (+46%, +8% and +5% respectively) and decreased in the Northern and Southern HSCTs (-26% and -1% respectively).
- The largest increases in the male and female rates of self-harm were among residents of the South Eastern HSCT (+32% and +60% respectively).

1.1.2 Ideation

Acts of ideation include presentations to the Emergency Department by persons who have experienced thoughts of self-harm and/or suicide, where no physical act has taken place.

- There were 4,784 ideation presentations recorded during the 12 month period from April 2017 to March 2018. There has been a 50% increase in the number of ideation presentations between 2012/13 and 2017/18.
- In 2017/18 a larger proportion of ideation presentations were attributable to males (65%) with 35% attributed to females.
- These 4,784 ideation presentations were made by 3,310 individuals.
- Almost half (46%) of all ideation presentations involved alcohol, and more so for males (48% vs. 43%).
- The Mater Hospital recorded the highest number of ideation presentations in 2017/18, accounting for 19% (n=918) of total presentations, followed by the Antrim and Craigavon Hospitals with a 14% share each (n=684 and 680 respectively) of presentations.
- The largest number of ideation presentations were recorded in the Belfast HSCT area (n=1,551), accounting for 32% of all ideation presentations made during this period.
- An average of 13 presentations involving ideation was recorded per day.
- Similar to self-harm presentations, data shows that the number of ideation presentations was highest at weekends.

- Approximately one-quarter (24%) of ideation presentations resulted in admission to a general ward following presentation to an ED, with a further 8% admitted to a psychiatric ward. One in ten presentations due to ideation resulted in the patient leaving the ED without being seen (5%) or before a next care recommendation could be made (5%).
- The age standardised rate of ideation in 2017/18 for Northern Ireland was 186 per 100,000. The rate in 2017/18 was 45% higher than in 2012/13 (128 per 100,000). There was an increase in male and female rates over this time period of 40% and 52% respectively.

2.0 Method of data collection

2.1 Definition of self-harm

The term 'self-harm' was derived from the term 'parasuicide'. The definition of 'parasuicide' was developed by the World Health Organisation (WHO)/ Euro Multicentre Study Working Group as:

'An act with non-fatal outcome in which an individual deliberately initiates a non-habitual behaviour, that without intervention from others will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognised therapeutic dosage, and which is aimed at realising changes that the person desires via the actual or expected physical consequences.'

Internationally, the term 'self-harm' has superseded 'parasuicide'. In recognition of this, the term 'self-harm' has been used in this report.

2.2 Inclusion criteria

The following are considered to be self-harm cases:

- All methods of self-harm i.e. drug overdoses, alcohol overdoses, lacerations, attempted drownings, attempted hangings, gunshot wounds, etc. where it is clear that the self-harm was intentionally inflicted.
- All individuals who are alive on presentation to hospital following an act of self-harm.

The Registry in Northern Ireland also collects data on cases of ideation, this is not the case in the Republic of Ireland.

2.3 Exclusion criteria

The following are NOT considered to be self-harm cases:

- Accidental overdoses e.g. an individual who takes additional medication in the case of illness, without any intention to self-harm.
- Alcohol overdoses alone where the intention was not to self-harm.
- Accidental overdoses of street drugs i.e. drugs used for recreational purposes, without the intention to self-harm.
- Acts of self-harm by individuals with learning disability. One of the reasons for exclusion is that self-harm is a behavioural outcome of some learning disabilities. Also it can be very hard to ascertain the level of intent in these situations (e.g. if the person is fully understanding that the act is causing harm).
- Individuals who are dead on arrival at hospital as a result of suicide.

2.4 Ideation

Acts of ideation include presentations to the Emergency Department by persons who have experienced thoughts of self-harm and/or suicide, where no physical act has taken place. These include acts where no physical harm has taken place due to self-interruption and excludes cases where acts were interrupted by others. Acts interrupted by others are defined as self-harm.

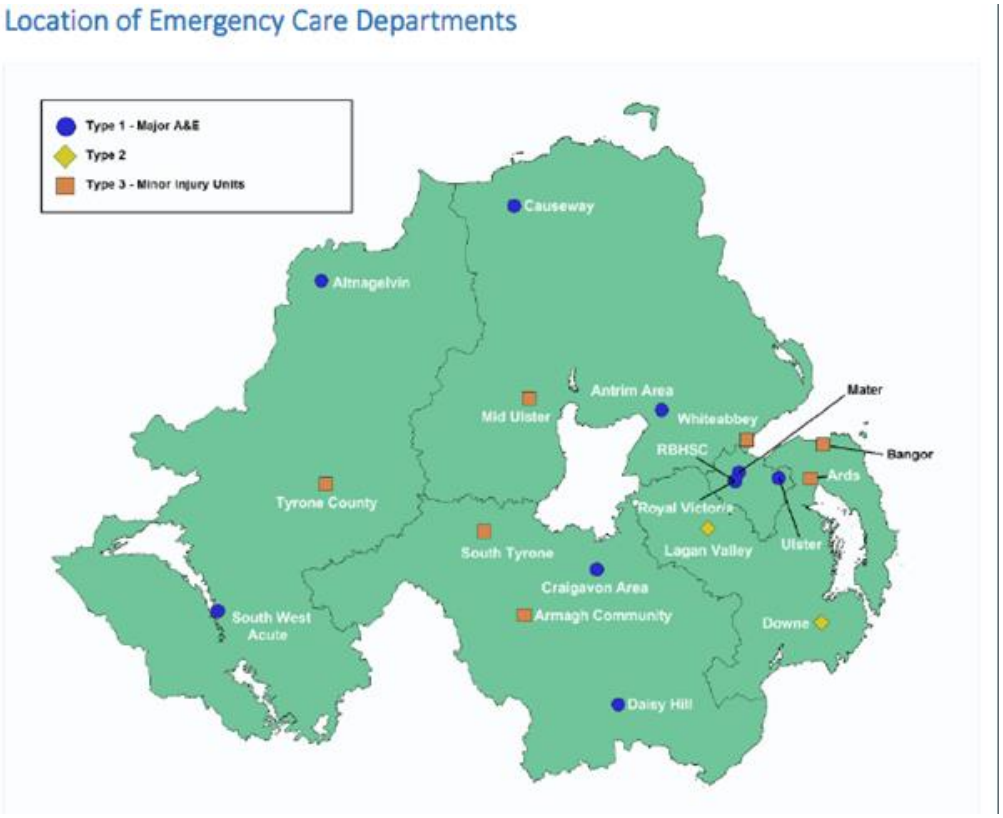
2.5 Hospitals

This report is based on anonymised information collected from the 12 hospital EDs in Northern Ireland:

- Emergency Department, Royal Victoria Hospital
- Emergency Department, Mater Infirmorum Hospital
- Emergency Department, Royal Belfast Hospital for Sick Children
- Emergency Department, Ulster Hospital
- Emergency Department, Lagan Valley Hospital
- Emergency Department, Downe Hospital
- Emergency Department, Antrim Hospital
- Emergency Department, Causeway Hospital
- Emergency Department, Craigavon Hospital
- Emergency Department, Daisy Hill Hospital
- Emergency Department, Altnagelvin Hospital
- Emergency Department, South West Acute Hospital

Regarding ED type this report includes data obtained from Type 1 and Type 2 EDs. Type 3 EDs are not included in this report. The locations of these hospitals can be seen in Figure 1 below.

Figure 1 Location of Emergency Care Departments in Northern Ireland.



A pilot data collection exercise revealed that there were very small numbers of cases presenting to the Type 3 EDs and therefore it was decided not to proceed with data collection from these sites. Data from Type 3 EDs have never been included in regional registry reports. Earlier reports relating to the Western Trust area included data from Tyrone County Hospital.

Type 1 EDs are those which have major units with consultant-led services and accommodation for patients, in which emergency medicine and surgical services are provided on a 24-hour basis. Type 2 EDs are those which provide consultant-led service with accommodation for patients, where either emergency medicine or emergency surgical services may be provided. These services may have restricted opening hours. All hospitals in this report, excluding Lagan Valley and Downe hospitals are Type 1 EDs. Lagan Valley and Downe hospitals are Type 2 EDs and since January 2014 have reduced opening hours from 8am – 8pm Monday to Fridays, with no access at weekends, which may explain the low numbers of presentations at these hospitals.

2.6 Data recording and case finding

Data collectors check all entries of attendance at the hospital's ED department. All potential cases of self-harm and ideation presenting to the ED should be identified by the data collector, using the inclusion criteria (see section 2.2-2.4). The emergency department number, date and time of attendance, along with other relevant details are recorded on the password protected data collection sheet. Anonymised information on these cases is then entered onto a data entry system for analysis.

2.7 Data items

A minimum dataset has been developed to determine the extent of self-harm, the circumstances relating to the act and to examine trends by area. Reference numbers and area codes are encrypted prior to data entry to ensure that it is impossible to identify an individual on the basis of the data recorded. For the purpose of this report the following datasets are used.

- **Reference numbers**
  Two reference numbers are recorded. One number refers to the A&E episode which is automatically assigned by the A&E computer system. The second reference number refers to the patient's Health & Care number which is used to highlight repeat attendances. These numbers are encrypted prior to entry and can only be decrypted by the data recorder.

- **Gender**

- **Age**

- **Date and hour of attendance**

- **Brought by**
  The method of arrival is recorded to identify self-referrals and the use of the emergency services.

- **Method(s) of self-harm**
  The method(s) of self-harm are recorded according to the Tenth Revision of the WHO's International Classification of Diseases codes for intentional injury (ICD-10 X60-X84). The

main methods included are overdose of drugs and medicaments (X60-X64), self-poisonings by alcohol (X65), poisonings which involve the ingestion of chemicals, noxious substances, gases and vapours (X66-X69) and self-harm by hanging (X70), by drowning (X71) and by sharp object (X78). Some individuals may use a combination of methods e.g. overdose of medications and laceration of wrists.

- **Drugs taken**
  Where applicable, the name and quantity of the drugs taken are recorded.

- **Place of Residence**
  The post / area code of residential addresses is recorded. Once entered, the postcode is replaced by a ward name so to remove the identity of the exact area. This is non-reversible.

  The Registry also collects information on the following key subgroups who present to ED with self-harm:

  - homeless persons who are: sleeping on the streets or staying in a temporary hostel / B&B
  - residents of children's residential homes
  - persons in prison at the time of the self-harm act
  - persons residing in psychiatric hospitals

- **Seen by**
  This identifies cases that were seen by a clinician and those who leave before receiving any treatment.

- **Recommended next care**
  The Registry collects data with regard to the outcome of the presentation to the ED and the next care that was recommended by the ED team. This information is derived from the ED notes and therefore is limited and requires care in interpretation.

  Categories of next care recorded by the Registry are:
  - admission to a general hospital ward
  - admission to a psychiatric hospital ward
  - patient left before a decision was made regarding next care
  - patient refused to be admitted
  - patient was discharged following treatment.

  Patients discharged from the ED following treatment will include a range of different types of cases:

  - those discharged into acute community based psychiatric care;
  - those discharged with a follow up appointment under the Card Before You Leave Scheme;
  - those who received assessment by a mental health practitioner in the ED and were discharged either to their GP or with a follow-up plan in place;
  - those where ED staff determined that a referral to mental health services was not required or was declined when offered).

2.8 Reporting period

Information for this report reflects quarterly performance returns submitted to the Department of Health, Social Services and Public Safety (DHSSPS) as part of the PHA's commissioning objectives and relates to the 12 month period from 1st April 2017 to 31st March 2018.

2.9 Confidentiality

Confidentiality is strictly maintained. The data collectors have completed data protection training and are legally required to follow standards of the Data Protection Act and any additional data security policies set out by the Belfast Health & Social Care Trust, the Health & Social Care Board and the PHA. No identifiable client information is recorded or used in reports. The data collector is monitored by an appropriately qualified Regional Board Officer and has direct access to this Officer if queries arise in relation to patient level data or data security.

2.10 Quality assurance

Regular audits are carried out to check the accuracy of the data collection process. The outcome of the audits showed that the process used was both effective and efficient.

A quality assurance exercise involved the data collector applying the same case finding process to data from another hospital which is participating in the Registry. The cases identified were compared with those identified by another data collector. The outcome of this provided assurance that both data collectors were working to the same level and applying the criteria correctly.

2.11 Registry coverage

Self-harm information was collected from all the 12 Type 1 and Type 2 EDs in Northern Ireland.

2.12 Cautions

The identification of cases and the detail regarding each episode recorded by the Registry is dependent on the quality of clinical records kept.

Where differences between geographical areas are highlighted it is important to note that these are not necessarily statistically significant. This particularly applies to analyses by gender and age, where the numbers of cases may be relatively small. Therefore, caution should be exercised in interpreting such findings. It is recommended that findings are not used to determine trends as this report is only the second of its kind.

2.13 Calculation of rates

Self-harm rates were calculated based on the number of persons' resident in the relevant HSCT area who presented to hospital as a result of self-harm.

European age-standardised rates (EASRs) are the incidence rates that would be observed if the population under study had the same age composition as a theoretical European population. Adjusting for the age composition of the population under study ensured that differences observed by gender or by area are due to differences in the incidence of self-harm rather than differences in the composition of the populations. EASRs were calculated as follows: For each five-year age group, the number of persons who engaged in self-harm was divided by the population at risk and then

multiplied by the number in the European standard population. The EASR is the sum of these age-specific figures.

Section 3: Self-harm presentations

3.1 Number of self-harm presentations

For the period from 1st April 2017 to 31st March 2018, the Registry recorded 9,217 self-harm attendances to emergency departments (EDs) in Northern Ireland, summarised in Table 1. These are referred to as presentations and it should be noted that one individual may have had multiple attendances.

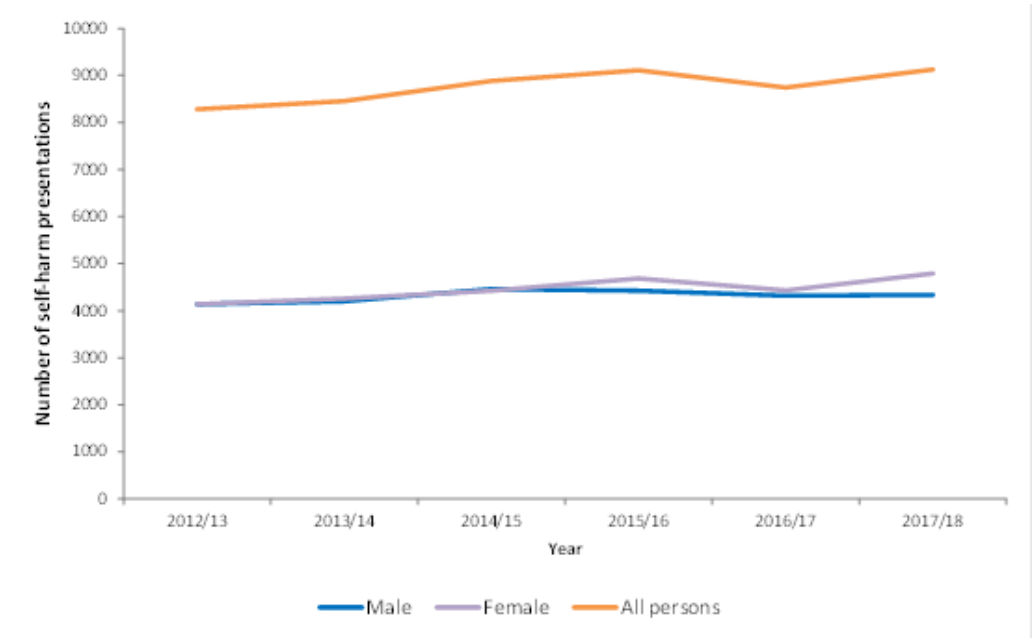
This reflects almost 1% of all ED attendances. During 2017-18 there were a total of 796,474 new and unplanned review attendances to EDs for any reason.

Of the recorded attendances, there were 4,333 male and 4,794 female self-harm presentations over the 12 month period.

Table 1 Number of self-harm presentations to EDs in Northern Ireland, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All Presentations	
Year	Number	% change from previous year	Number	% change from previous year	Number	% change from previous year
2012/13	4,139	-	4,140	-	8,279	-
2013/14	4,202	+1.5%	4,254	+2.8%	8,456	+2.1%
2014/15	4,459	+6.1%	4,426	+4.0%	8,885	+5.1%
2015/16	4,424	-<1%	4,686	+5.9%	9,110	+2.5%
2016/17	4,316	+2.4%	4,429	-5.5%	8,745	-4.0%
2017/18	**4,333**	**+<1%**	**4,794**	**+8.2%**	**9,127**	**+4.4%**

Figure 2 Number of self-harm presentations to EDs in Northern Ireland by gender, 2012/13 to 2017/18.



Given that one individual may have made multiple presentations, the recorded 9,127 episodes in 2017/18 were made by 6,107 individuals, summarised in Table 2.

Table 2 Individual persons presenting with self-harm to EDs in Northern Ireland, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All Persons	
Year	Number	% change from previous year	Number	% change from previous year	Number	% change from previous year
2012/13	2,976	-	3,001	-	5,977	-
2013/14	2,987	+<1%	2,997	-<1%	5,984	+<1%
2014/15	3,021	+1.1%	3,005	+<1%	6,026	+<1%
2015/16	2,982	-10.3%	3,155	-4.5%	6,137	-7.4%
2016/17	2,914	-2.3%	3,025	-4.1%	5,939	-3.2%
2017/18	**2,968**	**+1.8%**	**3,139**	**+3.7%**	**6,107**	**+2.8%**

Note: Total individual persons does not equal sum of individual years

Figure 3 Number of individuals presenting with self-harm to EDs in Northern Ireland by gender, 2012/13 to 2017/18

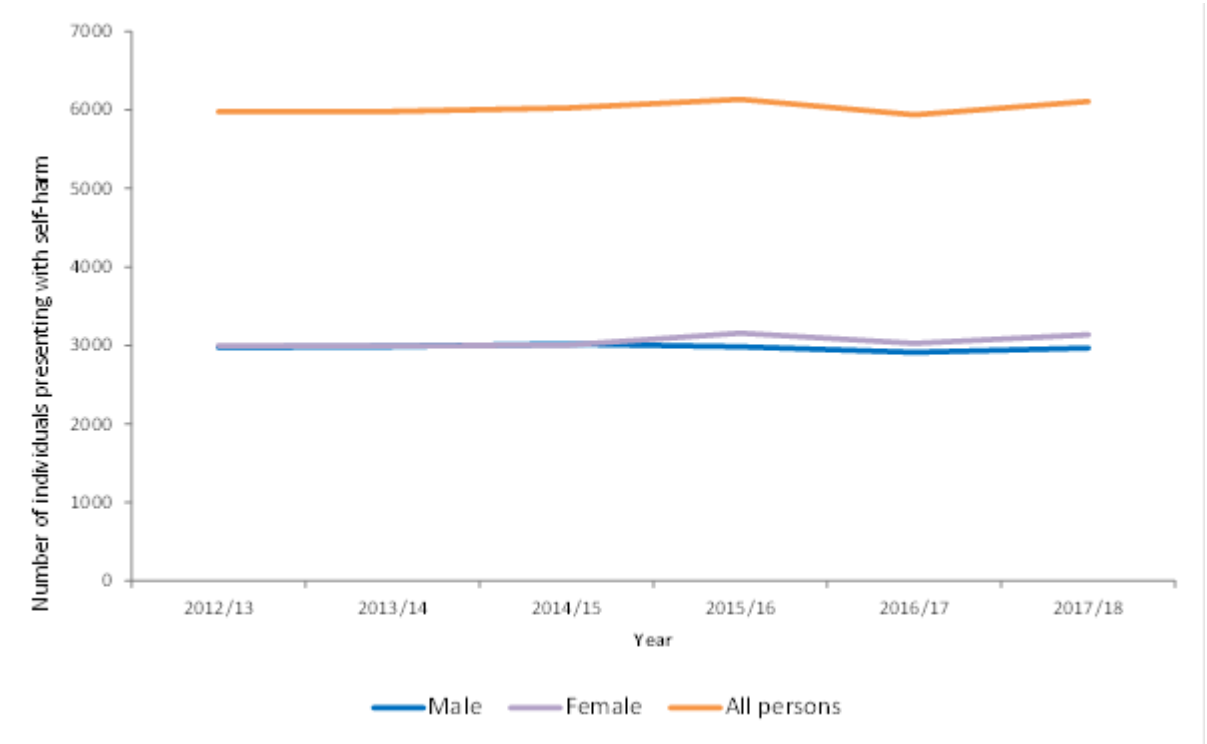


Table 3 Ratio of female to male self-harm presentations, 2012/13 to 2017/18.

Year	Ratio of F:M presentations
2012/13	1.00
2013/14	1.01
2014/15	0.99
2015/16	1.06
2016/17	1.03
2017/18	**1.11**

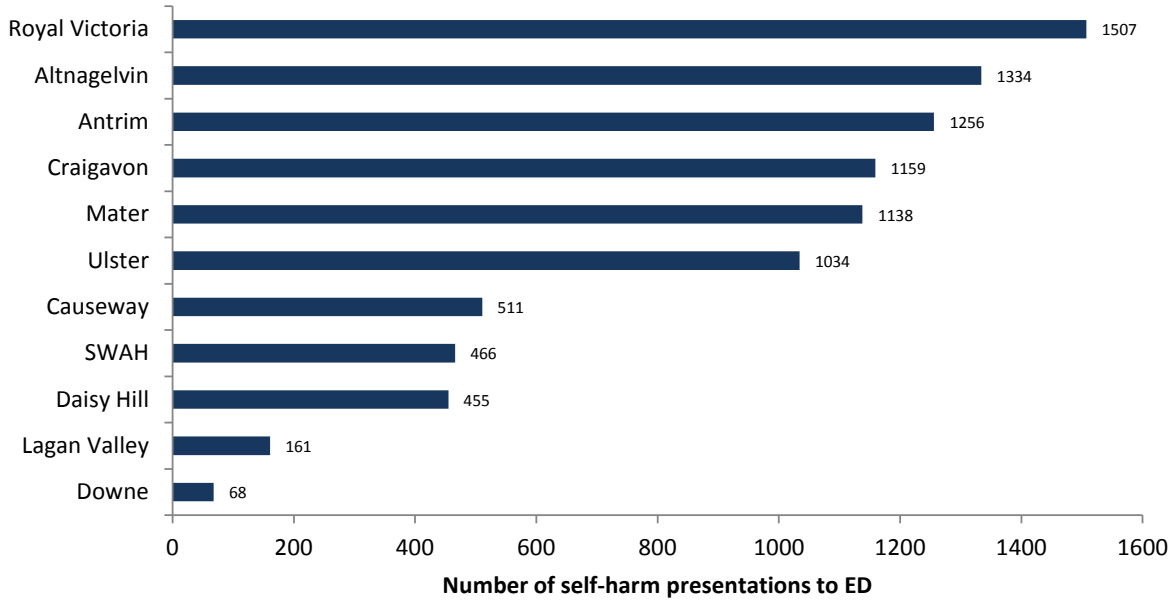
During the period 2012-2015, the gender balance was very close to even. This equal gender balance is unusual as data from the Republic of Ireland and UK centres typically reveal a marked female preponderance of self-harm. Since 2015/16 there has been a trend towards a greater ratio of female to male self-harm presentations in Northern Ireland. The gender balance by Trust area is referred to later in figure 5.

3.2 Self-harm presentations by hospital

The Registry records data across all twelve EDs in Northern Ireland. The Royal Victoria Hospital in Belfast recorded the largest number of presentations in 2017/18, accounting for 17% (n=1,507) of total presentations, followed Altnagelvin Hospital with a 15% share (n=1,334) and Antrim Hospital with 14% (n=1,256) of presentations. Excluding the Royal Hospital for Sick Children, Downe Hospital had the lowest share of presentations (<1%; n=68).

The distribution of self-harm presentations between hospitals is summarised in Figure 4, below.

Figure 4 Number of self-harm presentations by hospital ED, 2017/18.



**This graph omits the Royal Hospital for Sick Children due to small identifiable numbers*

3.3 Summary of self-harm presentations by Health and Social Care Trust (HSCT) in Northern Ireland

The largest number of self-harm presentations was recorded in the Belfast HSCT area (n=2,683), accounting for 29% of all presentations in Northern Ireland in 2017/18, despite the Trust area having a 19% share of the total NI population. Conversely, the Northern Trust EDs have lower than expected presentations based on their proportion of the NI resident population (Table 4).

Table 4 Self-harm presentations share by HSCT area, 2017/18.

	BHSCT	SEHSCT	NHSCT	SHSCT	WHSCT	Northern Ireland
Hospital based self-harm presentations	2,683	1,263	1,767	1,614	1,800	9,127
% share of self-harm presentations	29.4%	13.8%	19.4%	17.7%	19.7%	100%
% of NI population resident in Trust*	19.0%	19.2%	25.4%	20.3%	16.1%	100%

**NISRA 2017 Mid-Year Estimate Resident Population*

While overall patients presented to a hospital within their Trust of residence, there were some observed variations. During 2017/18 over one-quarter (27%) of South Eastern trust residents presenting with self-harm did so to a hospital in the Belfast HSCT area (Table 5). In the Belfast area, 16% presented to hospitals in SEHSCT. In the Northern HSCT area, 8% of those who presented to hospital with self-harm did so to a BHSCT hospital.

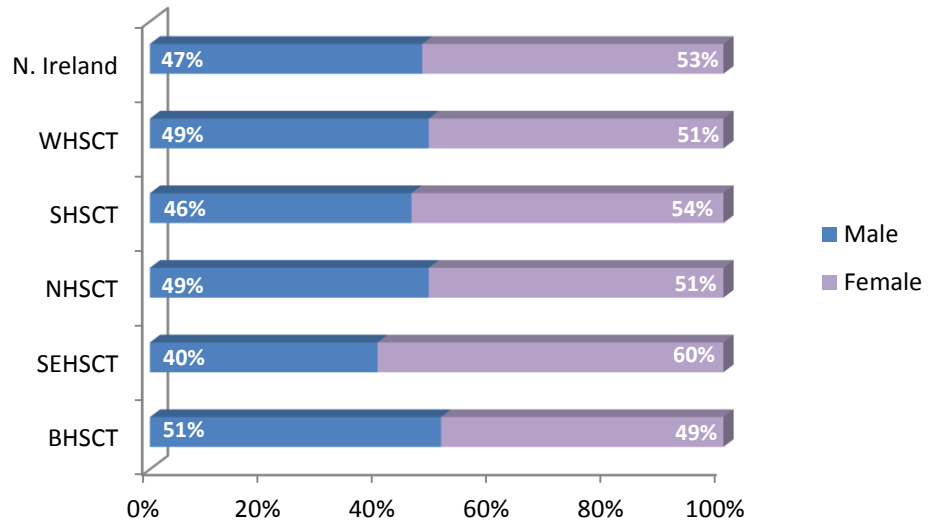
The majority (96%) of presentations to hospitals in both the Southern and Western HSCT areas were by residents from within their respective Trust.

Table 5 Self-harm presentations by Trust of residence and presenting hospital of Trust residents, 2017/18.

Self-harm presentations		Presenting hospital location					
		BHSCT Hospitals	SEHSCT Hospitals	NHSCT Hospitals	SHSCT Hospitals	WHSCT Hospitals	Total
Resident Trust Area	**BHSCT**	**82.8%**	15.6%	1.0%	<1%	<1%	100%
	SEHSCT	27.1%	**65.0%**	<1%	6.9%	<1%	100%
	NHSCT	8.0%	<1%	**88.3%**	2.4%	<1%	100%
	SHSCT	1.6%	<1%	<1%	**95.5%**	2.0%	100%
	WHSCT	<1%	<1%	3.2%	<1%	**95.8%**	100%

The gender balance of self-harm presentations to EDs in Northern Ireland during 2017/18 was 48% male and 53% female and this varied by HSCT area as detailed in figure 5.

Figure 5 Percentage self-harm presentations by gender and HSCT area in Northern Ireland, 2017/18.

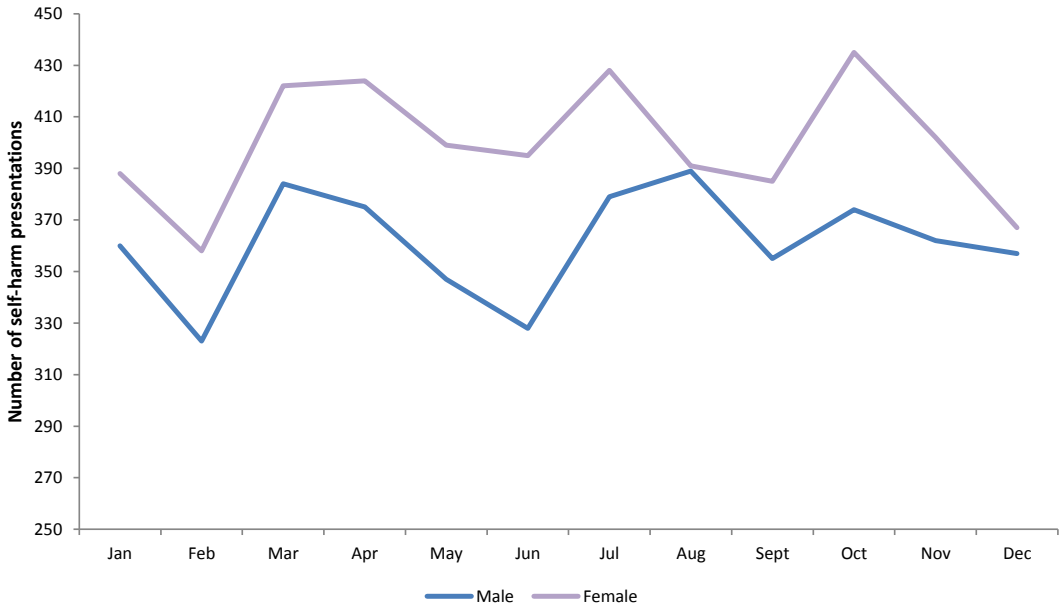


3.4 Self-harm presentations by time of occurrence

Variation by month

The monthly average number of self-harm presentations to hospitals in 2017/18 was 761. The month of February saw the fewest self-harm presentations to EDs at 681 (11% below average) while the peak months were October, July and March with 809, 807 and 806 presentations (6% above average, Figure 6).

Figure 6 Self-harm presentations by month of attendance, 2017/18.



Variation by day and time of attendance

During 2017/18, an average of 25 presentations to ED involving self-harm were recorded per day. Table 6 examines the pattern of self-harm attendances by weekday and time of attendance. Considering presentations made on weekdays (Monday to Friday), only 28% were made between the hours of 9am to 5pm, with 27% made between 5pm and 10pm and 45% made between 10pm and 9am. For presentations at the weekend (Saturday and Sunday), 24% occur between 5pm and 10pm and a further 52% occur between the hours of 10pm and 9am.

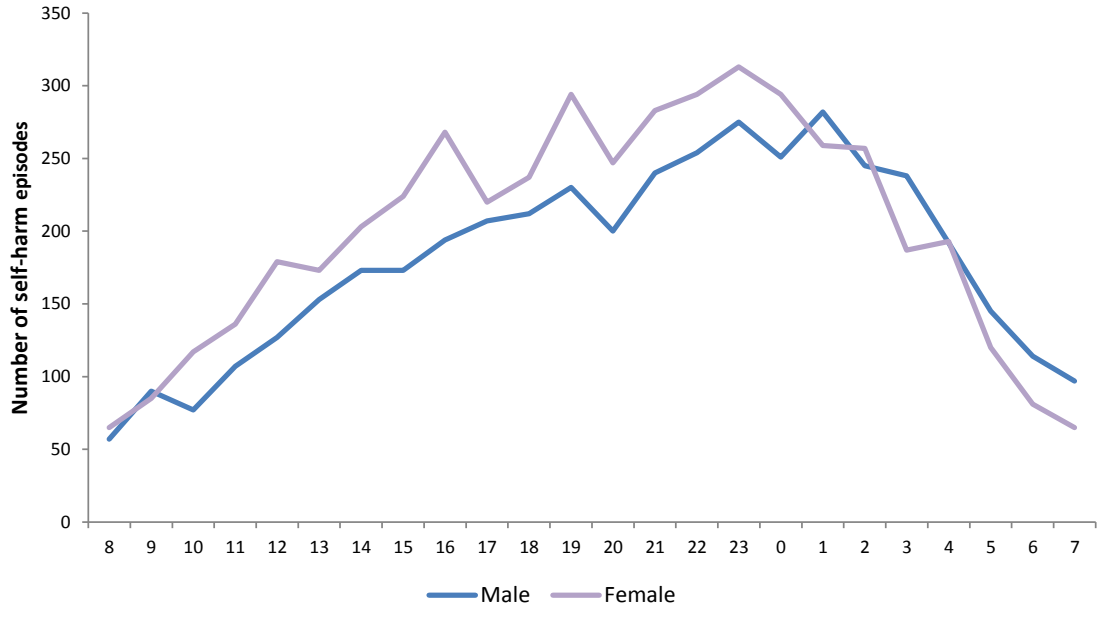
Table 6 Self-harm episodes by day and time of presentation, 2017/18.

Northern Ireland	All persons		
	Mon-Fri	Sat-Sun	Total Mon-Sun
9am until 5pm	1,774 (28%)	705 (24%)	**2,479 (27%)**
5pm until 10pm	1,687 (27%)	683 (24%)	**2,370 (26%)**
10pm until 9am	2,784 (45%)	1,494 (52%)	**4,278 (47%)**
Total	6,245 (100%)	2,882 (100%)	**9,127 (100%)**

Variation by hour

There was an increase in the frequency of self-harm presentations over the course of the day with the highest numbers presenting around midnight (Figure 7). Numbers for both males and females gradually increased during the day. The peak for males was 1am and for females was 11pm.

Figure 7 Number of self-harm presentations by time of occurrence, 2017/18.



Mode of arrival

In self-harm presentations, patients may be accompanied to the hospital by more than one service. The majority (67%) of presentations were brought to hospital by emergency (e.g. ambulance and police). In one-quarter of presentations (24%), the patient self-presented to the hospital ED.

3.5 Methods of self-harm

Table 6 details the methods involved in self-harm presentations in Northern Ireland. More than one method may be used and therefore the figures do not add up to 100%. The most common method of self-harm was drug overdose, which was involved in almost two-thirds (64%) of all self-harm presentations. Drug overdose was more common among females than males (67% vs. 61% respectively). Self-cutting was the only other common method of self-harm, present in 30% of all presentations (Table 7). Methods of self-harm varied across HSCT areas. Most notably, the proportion of presentations involving attempted drowning ranged from 1% in BHSCT to 14% in WHSCT (see Section 7).

Table 7 Methods of self-harm by gender, 2017/18.

	Drug Overdose	Self-cutting	Self-poisoning	Attempted hanging	Attempted drowning
Male	2,657	1,286	66	286	237
%	(61.3%)	(29.7%)	(1.5%)	(6.6%)	(5.5%)
Female	3,214	1,414	62	148	149
%	(67.0%)	(29.5%)	(1.3%)	(3.1%)	(3.1%)
Total	**5,871**	**2,700**	**128**	**434**	**386**
%	**(64.3%)**	**(29.6%)**	**(1.4%)**	**(4.8%)**	**(4.2%)**

While rare as a sole method of self-harm, alcohol was involved in 44% of all self-harm presentations. The proportion was higher among males than females (52% v 38%).

The involvement of alcohol in 2017/18 varied across HSCT area, ranging from 39% in the South East to 47% in the Western HSCT.

Alcohol involvement was elevated in self-harm presentations among males where attempted drowning was involved (62%). Alcohol involvement was lower among presentations due to attempted hanging and self-poisoning (Figure 8).

Figure 8 Alcohol involvement in self-harm episodes by method and gender, 2012/13 to 2017/18.

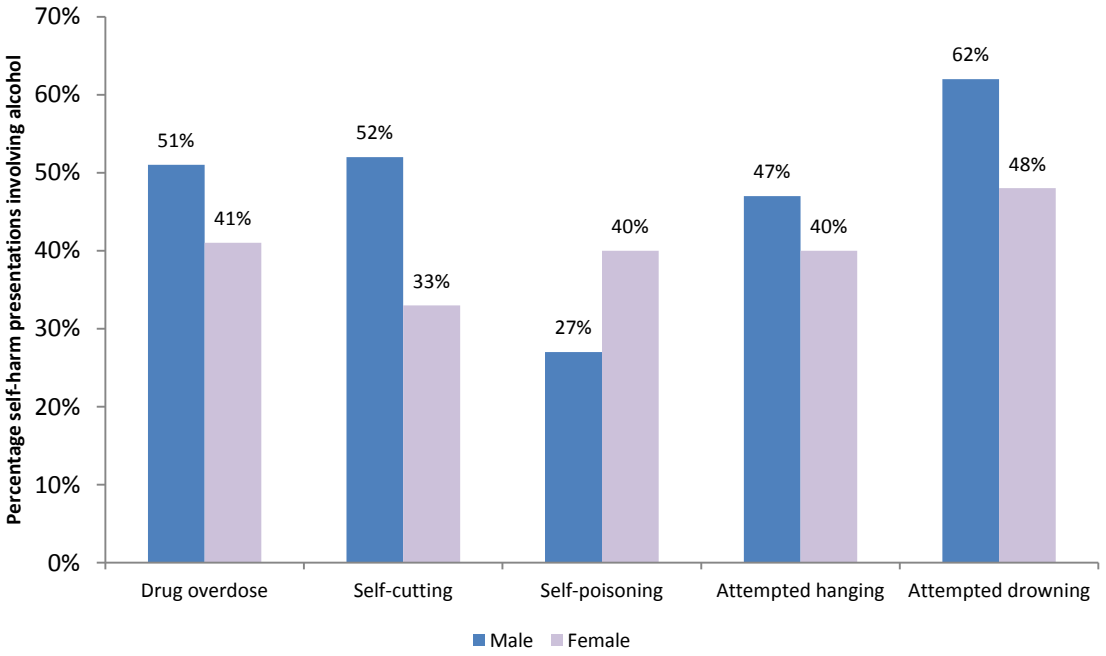
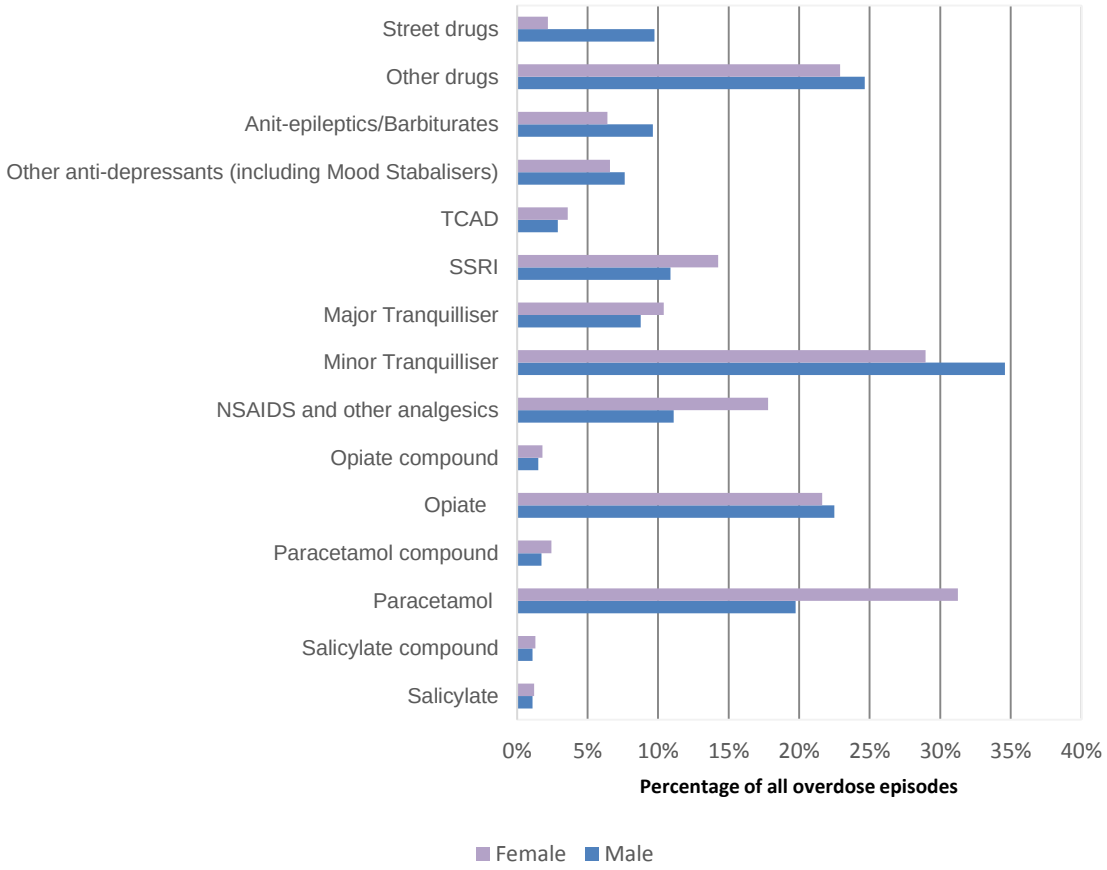


Figure 9 illustrates the frequency with which the most common types of drugs were used in overdose. It should be noted that this reflects the information reported to the ED staff by the patient which may not always be accurate, as toxicology results will not always be available. Furthermore, the Registry does not record information on the sources of these medication.

Almost one-third (32%) of all overdoses involved a minor tranquilliser (e.g. benzodiazepines) and were more often taken by males than females (35% vs. 29%, respectively). In total, 60% of all female overdose acts and 48% of male acts involved an analgesic drug. Paracetamol was the most common analgesic drug taken, present in some form in 28% of overdoses. Paracetamol-containing medication was used significantly more often by females than males (33% vs. 21%).

Figure 9 Variation in the types of drugs used in intentional overdose cases by gender, 2017/18.



As detailed in Figure 10, drugs used in overdose acts varied according to age. Minor tranquillisers were more often used by older adults. For those aged 65 years and over, minor tranquillisers were present in 44% of female and 27% of male overdoses. Paracetamol-containing medication was most often involved in overdoses by young females, present in 44% of female presentations by those aged under 25 years, and by males over the age of 65 years, present in 44% of overdoses in this age group. Anti-depressants were more often used by 45-64 year old males (24%) and females (27%).

Figure 10 Drugs used in intentional overdose by age for males (left) and females (right), 2017/18.

3.6 Trends in methods of self-harm over the period 2012/13 to 2017/18

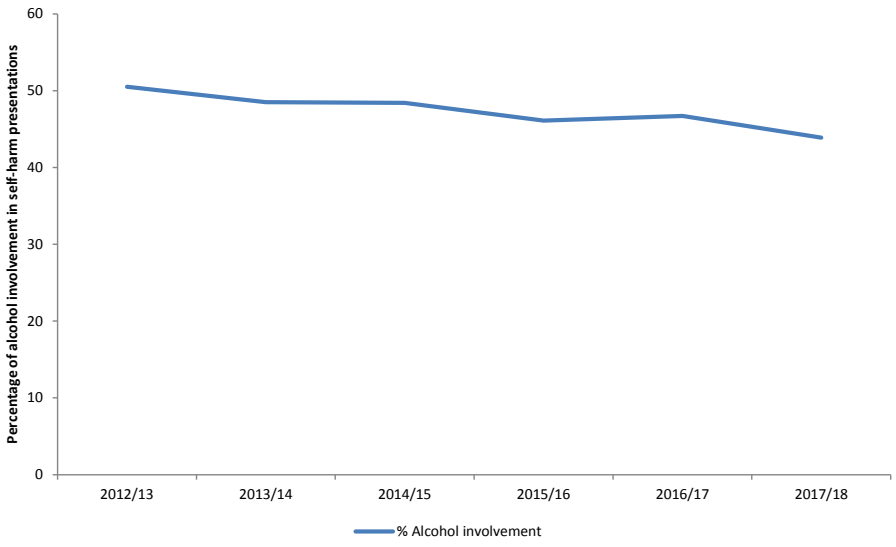
Over the six year period the proportion of self-harm attendances to ED involving drug overdose decreased by 11% while increases were observed in the proportion of cases involving self-cutting (+7%), attempted drowning (+3%) and attempted hanging (+1%) (Table 8).

Table 8 Percentage method involved in self-harm presentations by year, 2012/13 to 2017/18.

Year	Drug Overdose	Self-cutting	Self-poisoning	Attempted hanging	Attempted drowning
2012/13	74.9%	23.1%	1.1%	3.8%	1.0%
2013/14	73.7%	23.8%	1.1%	3.6%	1.3%
2014/15	71.9%	26.4%	1.7%	3.9%	1.4%
2015/16	70.5%	25.8%	1.2%	4.9%	3.0%
2016/17	68.2%	26.6%	1.5%	5.2%	3.2%
2017/18	**64.3%**	**29.6%**	**1.4%**	**4.8%**	**4.2%**

The involvement of alcohol in self-harm attendances to ED has decreased over the six year period from 51% of cases in 2012/13 to 44% in 2017/18 as outlined in figure 11.

Figure 11 Alcohol involvement in self-harm episodes, 2012/13 to 2017/18.



3.7 Recommended next care following self-harm

Table 9 illustrates the recommended next care for self-harm presentations made to hospital EDs. For an explanation of these terms refer to section 2.7. In 2017/18, admission to either a general or psychiatric ward occurred in 45% of presentations with 40% admitted to a general ward and a further 6% resulting in psychiatric admission. The proportion admitted to the general hospital has steadily declined over the period 2012/13 to 2017/18. In contrast the proportion admitted to a psychiatric hospital has increased during the same period.

Almost half (47%) of self-harm cases were discharged from the ED following treatment. Over the time period the proportion of self-harm presentations that are managed without requiring admission to hospital has increased.

In 3% of presentations, the patient left the ED without being seen and this was more common among males (4% vs. 2%).

In 4% of presentations, the patient left the ED before a decision regarding next care was made. Fewer than 1% of presentations resulted in the patient refusing admission, as recommended by the presenting hospital. Between 2012/13 and 2017/18, the proportion of presentations leaving the ED before decision, without being seen or refusing admission decreased from 11% to 8%.

Table 9 Recommended next care following self-harm attendance to hospital emergency departments in Northern Ireland, 2012/13 to 2017/18.

Next care	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
General admission	4,817 (58.2%)	4,442 (52.5%)	4,588 (51.6%)	4,312 (47.3%)	3,506 (40.1%)	**3,619 (39.7%)**
Psychiatric admission	313 (3.8%)	311 (3.7%)	346 (3.9%)	451 (5.0%)	449 (5.1%)	**521 (5.7%)**
Refused admission	163 (2.0%)	147 (1.7%)	90 (1.0%)	78 (<1%)	94 (1.1%)	**82 (<1%)**
Left ED before decision made regarding next care	207 (2.5%)	275 (3.3%)	264 (3.0%)	250 (2.7%)	334 (3.8%)	**346 (3.8%)**
Left ED without being seen	533 (6.4%)	747 (8.8%)	499 (5.6%)	408 (4.5%)	279 (3.2%)	**279 (3.1%)**
Discharged from ED following treatment	2,246 (27.1%)	2,534 (30.0%)	3,098 (34.9%)	3,611 (39.6%)	4,083 (46.7%)	**4,280 (46.9%)**

Recommended next care varied depending on the presenting method of self-harm used (Table 10). General admission was most common following presentations involving intentional drug overdose (51%) and was least common for patients who presented with self-cutting (20%). Patients presenting with self-cutting were most often discharged from the ED following treatment (64%).

Psychiatric admission was most common in presentations involving highly lethal methods of self-harm, in particular following attempted hanging (14%) and attempted drowning (15%).

The trend towards a lower proportion of cases of self-harm being admitted to the general hospital may be related to a change in the methods of self-harm used over time, as detailed in section 3.6.

Table 10 Recommended next care by method of self-harm, 2017/18.

Next care	Drug overdose (n=5,871)	Self-cutting (n=2,700)	Self-poisoning (n=128)	Attempted hanging (n=434)	Attempted drowning (n=386)
General admission	50.7%	20.3%	32.8%	34.3%	28.0%
Psychiatric admission	3.7%	6.8%	8.6%	14.3%	15.0%
Refused admission	<1%	<1%	<1%	1.2%	<1%
Left ED before decision made regarding next care	3.6%	4.0%	3.9%	2.5%	8.8%
Left ED without being seen	2.5%	4.4%	1.6%	1.6%	1.6%
Discharged from ED following treatment	38.5%	63.5%	52.3%	46.1%	45.9%

Recommended next care varied significantly by HSCT area (Table 11). The proportion of patients who left the ED without being seen varied from 1% in the South Eastern HSCT to 6% in the Belfast HSCT.

Table 11 Recommended next care following self-harm attendance to hospital by HSCT area, 2017/18.

Next care	BHSCT n=(2,683)	SEHSCT n=(1,263)	NHSCT n=(1,767)	SHSCT n=(1,614)	WHSCT n=(1,800)	Northern Ireland n=(9,127)
General admission	909 (33.9%)	382 (30.2%)	859 (48.6%)	771 (47.8%)	698 (38.8%)	**3,619 (39.7%)**
Psychiatric admission	53 (2.0%)	73 (5.8%)	84 (4.8%)	130 (8.1%)	181 (10.1%)	**521 (5.7%)**
Refused admission	17 (<1%)	<10 (<1%)	14 (<1%)	26 (1.6%)	19 (1.1%)	**82 (<1%)**
Left ED before decision made regarding next care	94 (3.5%)	23 (1.8%)	57 (3.2%)	32 (2.0%)	140 (7.8%)	**346 (3.8%)**
Left ED without being seen	155 (5.8%)	15 (1.2%)	38 (2.2%)	43 (2.7%)	28 (1.6%)	**279 (3.1%)**
Discharged from ED following treatment	1,455 (54.2%)	764 (60.5%)	715 (40.5%)	612 (37.9%)	734 (40.8%)	**4,280 (46.9%)**

Across HSCT area, general admission was recommended for 49% of self-harm patients in the Northern, 48% in the Southern, 39% in the Western, 34% in the Belfast and 30% in the South Eastern HSCT. Admission to a psychiatric ward varied from 2% in BHSCT to 10% in WHSCT. This may reflect variation between Trusts in the balance between community based and in-patient based psychiatric services.

3.8 Repetition of self-harm

There were 6,107 individuals treated for 9,127 self-harm episodes over the 12-month period from April 2017 to March 2018. This implies that one-third (33%) of the presentations were due to repeat acts.

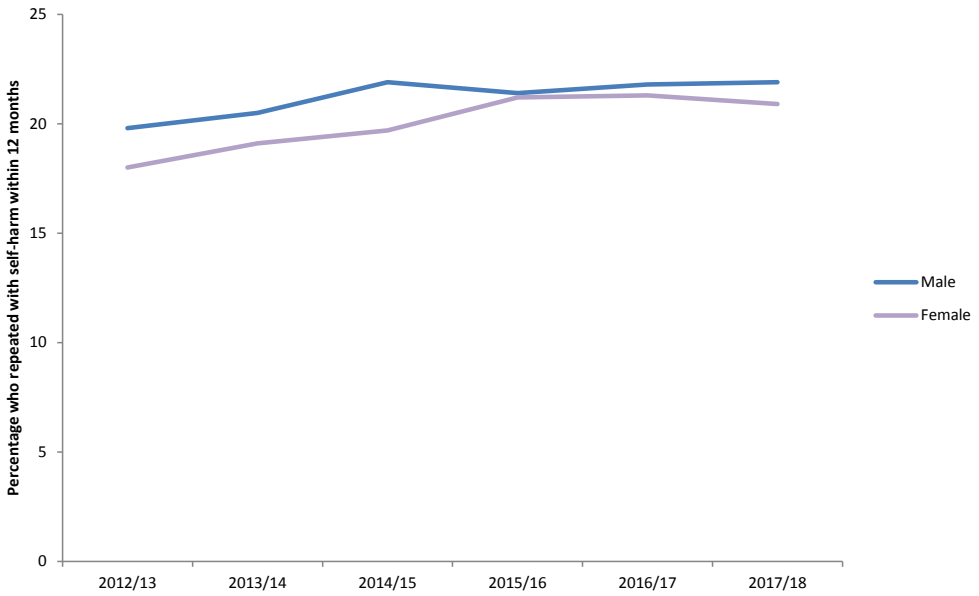
Of the 6,107 individuals, 1,305 (21%) made at least one repeat presentation to hospital with self-harm within 2017-18. This indicates that one in five self-harm patients represented to the ED with self-harm within the 12 months studied.

The repetition rates are similar for males and females. Repetition rates have been relatively stable over the period 2015/16 to 2017/18 but show a slight increase from the baseline in 2012/13.

Table 12 Repetition rate within the 12 months studied, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All Presentations	
Year	Repetition Rate	% change from previous year	Repetition Rate	% change from previous year	Repetition Rate	% change from previous year
2012/13	19.8%	-	18.0%	-	18.9%	-
2013/14	20.5%	+0.7%	19.1%	+1.1%	19.8%	+0.9%
2014/15	21.9%	+1.4%	19.7%	+0.6%	20.8%	+1.0%
2015/16	21.4%	-0.5%	21.2%	+1.5%	21.3%	+0.5%
2016/17	21.8%	+0.4%	21.3%	+0.1%	21.5%	+0.2%
2017/18	**21.9%**	**+0.1%**	**20.9%**	**-0.4%**	**21.4%**	**-0.1%**

Figure 12 Repetition rate of self-harm within the 12 months studied by gender, 2012/13 to 2017/18.



A relatively small proportion of presenting individuals (3%) had five or more presentations during 2017/18, accounting for 18% of all self-harm presentations (Table 13).

Table 13 Repetition distribution of self-harm presentations in Northern Ireland, 2017/18.

Number of presentations	Individual Persons	% of persons	Episodes	% of episodes
1	4,802	79%	4,802	53%
2	791	13%	1,582	17%
3	235	4%	705	8%
4	98	2%	392	4%
5 to 9	145	2%	905	10%
10 or more	36	1%	741	8%
Total	**6,107**		**9,127**	

As outlined in Table 14, the rate of repetition was similar across HSCT areas in 2017/18, and slightly elevated in Western and Belfast trusts (23%).

In the above analysis, repetition within the year studied has been presented. This method facilitates year to year comparison however it means individuals have varying degrees of follow-up. Individuals who present towards the end of the year have little follow-up time in which repetition may occur. When repetition is considered over a longer period, it can be seen that 49% of people presenting with self-harm, re-presented within 12 months with a further episode of self-harm. This allowed a full 12 month period of follow-up for each individual.

Table 14 Repetition of self-harm by HSCT Area, 2017/18.

	BHSCT	SEHSCT	NHSCT	SHSCT	WHSCT
Number of individuals treated	1,797	978	1,317	1,097	1,190
Number who repeated	408	185	273	218	278
Percentage who repeated	**22.7%**	**18.9%**	**20.7%**	**19.9%**	**23.4%**

When repetition is examined by method of self-harm, it can be seen that the highest rates of repetition are associated with self-cutting and attempted drowning (Table 15).

Table 15: Repetition rates by method of self-harm, 2017-18

	Drug overdose	Self-cutting	Poisoning	Attempted Hanging	Attempted drowning
Percentage person based repetition	19%	27%	14%	19%	26%

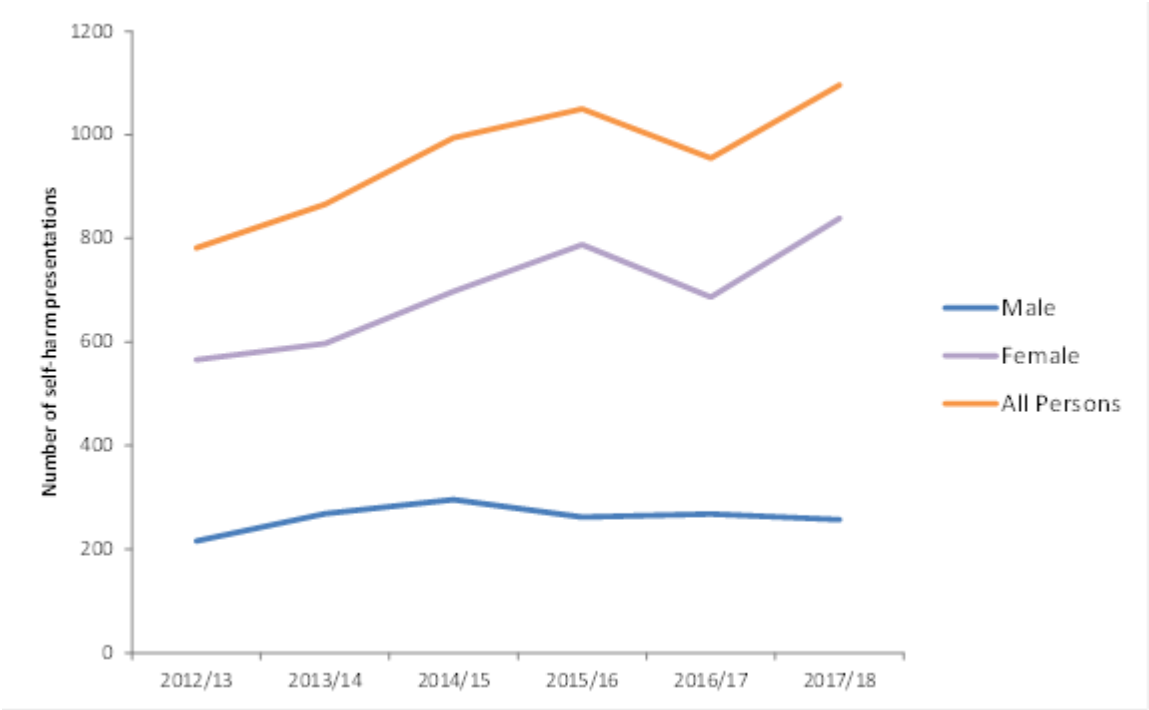
3.9 Self-harm behaviour in young people (under 18 years)

Self-harm presentations by those under 18 years of age contributed to 12% (n=1,096) of all self-harm presentations during 2017/18. The majority of these self-harm presentations were female (77%) (Table 16).

Table 16 Number of self-harm presentations by young people under 18 years, 2012/13 to 2017/18.

Northern Ireland	Male <18 yrs		Female < 18 yrs		All Presentations <18 yrs	
Year	Number	% difference from previous year	Number	% difference from previous year	Number	% difference from previous year
2012/13	216	-	566	-	782	-
2013/14	269	+25%	597	+5%	866	+11%
2014/15	296	+10%	698	+17%	994	+15%
2015/16	262	-11%	788	+13%	1050	+6%
2016/17	268	+2%	687	-13%	955	-9%
2017/18	**257**	**-4%**	**839**	**+22%**	**1096**	**+15%**

Figure 13 Number of self-harm presentations under 18 years to EDs in Northern Ireland by gender, 2012/13 to 2017/18.



3.9.1 Methods of self-harm, under 18 years

Drug overdose was the most common method of self-harm used by those aged under 18 years, and more so for females than males (63% vs. 49%) (Table 17). Self-cutting was a common method of self-harm used by young people, accounting for one-third of self-harm presentations (31% for males, 34% for females). Presentations involving attempted hanging or attempted drowning were more common among males than females (18.3% vs. 5.5%).

Table 17 Methods of self-harm used by young people under 18 years by gender, 2017/18.

	Drug overdose	Self- cutting	Self-poisoning	Attempted hanging	Attempted drowning
Male	127	79	<10	32	15
%	(49.4%)	(30.7%)	(<3%)	(12.5%)	(5.8%)
Female	528	286	19	31	15
%	(62.9%)	(34.1%)	(2.3%)	(3.7%)	(1.8%)
Total	**655**	**365**	**25**	**63**	**30**
%	**(59.8%)**	**(33.3%)**	**(2.3%)**	**(5.7%)**	**(2.7%)**

3.9.2 Alcohol involvement, under 18 years

Respectively, alcohol was involved in 23% and 14% of young male and female self-harm presentations to EDs in Northern Ireland in 2017/18.

3.9.3 Trends in methods of self-harm under 18 years, 2012/13 to 2017/18

Over the six year period the proportion of self-harm attendances to ED by young people involving drug overdose has decreased by 11% while there has been an increase in the proportion of cases involving self-cutting (+6%), attempted drowning (+2%) and attempted hanging (+2%) (Table 18).

Table 18 Percentage method involved in self-harm presentations under 18 years, 2012/13 to 2017/18.

Year	Drug Overdose	Self-cutting	Self-poisoning	Attempted hanging	Attempted drowning
2012/13	70.8%	27.5%	2.0%	4.1%	<1%
2013/14	68.5%	31.8%	1.8%	2.9%	<1%
2014/15	72.5%	29.2%	1.8%	4.2%	<1%
2015/16	66.1%	32.8%	2.2%	4.8%	2.8%
2016/17	65.2%	30.3%	3.8%	6.7%	2.4%
2017/18	**59.8%**	**33.3%**	**2.3%**	**5.7%**	**2.7%**

3.9.4 Recommended next care, under 18 years

In 2017/18, 41% of all those aged under 18 years were admitted to a general ward following presentation with self-harm while over half (55%) were discharged from the ED following treatment. A small proportion (2%) left the ED without being seen and fewer than 1% left the ED before a decision was made regarding their next care. There were 24 admissions (2%) to a psychiatric ward (Table 19).

Between 2012/13 and 2017/18, the proportion of young people being admitted to a general hospital decreased from 52% to 41%. The proportion who left the ED without being seen, before decision or refused admission decreased from 6% to 2%.

Table 19 Recommended next care, under 18 years, 2012/13 to 2017/18.

Next care	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
General admission	406 (51.9%)	422 (48.7%)	473 (47.6%)	477 (45.4%)	370 (38.7%)	**445 (40.6%)**
Psychiatric admission	13 (1.7%)	13 (1.5%)	14 (1.4%)	17 (1.6%)	19 (2.0%)	**24 (2.2%)**
Refused admission	10 (1.3%)	<10 (<1%)	<10 (<1%)	<10 (<1%)	<10 (<1%)	**<10 (<1%)**
Left ED before decision made regarding next care	<10 (1.2%)	12 (1.4%)	15 (1.5%)	<10 (<1%)	13 (1.4%)	**10 (<1%)**
Left ED without being seen	27 (3.5%)	49 (5.7%)	29 (2.9%)	19 (1.8%)	15 (1.6%)	**16 (1.5%)**
Discharged from ED following treatment	317 (40.5%)	367 (42.4%)	460 (46.3%)	526 (50.1%)	534 (55.9%)	**597 (54.5%)**

3.10 Key subgroup analysis

Homeless

Of all self-harm presentations in 2017/18, 92% (n=8,387) involved persons recorded as living in private residence, with 6% (n=587) involving persons who were recorded as homeless at the time of attendance. Just over half (53%) of these were male (n=308) and the majority presented to hospitals in Belfast HSCT (49%; n=285). The majority (90%) of those who were homeless were under the age of 45 years, with 56% aged between 25-44 years.

Prisons[1]

Approximately 1% (n=73) of all self-harm presentations recorded by the Registry were made by persons who were in prisons at the time of the self-harm act. The majority (85%, n=62) were male. The majority of these (55%, n=40) were presentations brought from Maghaberry Prison, with one-

[1] Maghaberry and Magilligan Prisons both house adult male prisoners. Hydebank Wood College accommodates young people aged between 18 and 21 years, as well as female prisoners in Ash House.

quarter (n=19; 26%) from Hydebank Wood Prison and 19% (n=14) from Magilligan Prison. Most of those presenting from a prison were aged between 25-44 years (62%). It should be noted that in the first instance episodes of self-harm are dealt with by the Northern Ireland Prison Service and will only present to Emergency Departments at acute hospitals if intensive intervention is required.

Residential children's homes

A total of 95 presentations (1%) were made by residents of residential children's homes. The majority were females (n=71; 75%) and highest numbers were observed in the 15-19 year age group for both genders (n=66; 70%). Most presentations by residents of residential children's homes were made to hospitals in the South Eastern HSCT (38%). It should be noted that the main specialist residential homes for children with complex needs are based in the Belfast and South Eastern HSCT areas.

Acute or psychiatric hospitals

A minority of presentations (n=79; <1%) were made by persons residing in acute or psychiatric hospitals. The majority of those presenting from psychiatric hospitals were female (87%; n=69).

Section 4: Incidence rates of self-harm

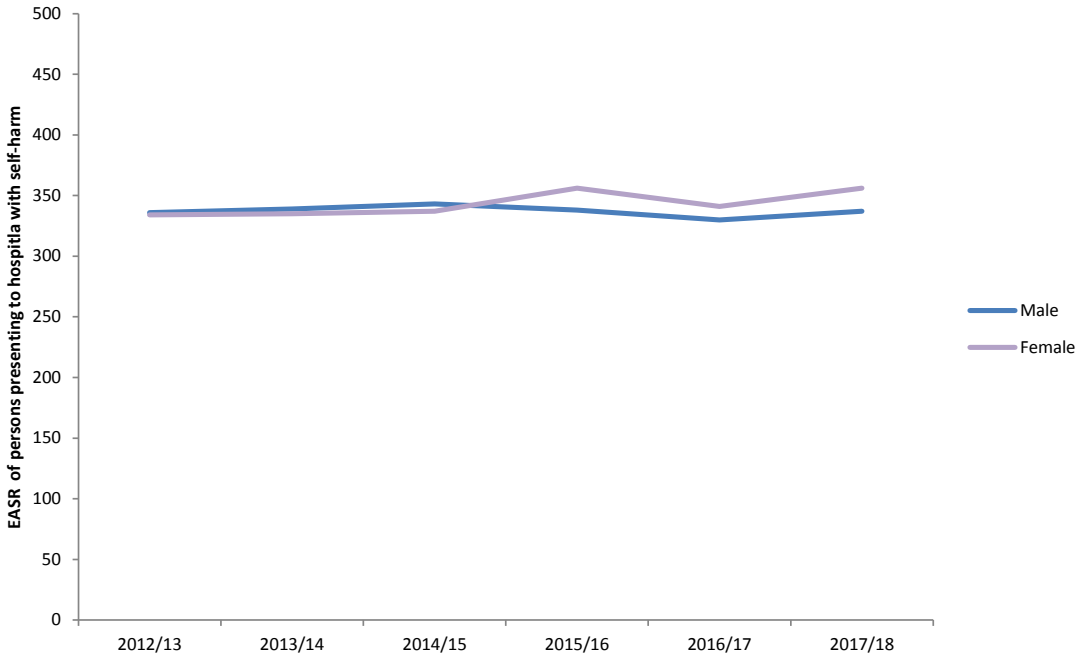
4.1 Incidence rates of self-harm in Northern Ireland

As in previous annual reports, European age-standardised rates (EASR) of self-harm were calculated to establish the incidence of self-harm in Northern Ireland. Based on the reported data, the age standardised rate of self-harm in 2017/18 for Northern Ireland was 346 per 100,000 – 337 per 100,000 for males and 356 per 100,000 for females (Table 20). The rate in 2017/18 was 4% higher than in 2012/13 (334 per 100,000). There was relatively no change in the male rate of self-harm during this period (+<1%), however the female rate of self-harm increased by 7%.

Table 20 European age-standardised rate (EASR) of persons presenting to hospital in Northern Ireland following self-harm, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All	
Year	Rate	% change from previous year	Rate	% change from previous year	Rate	% change from previous year
2012/13	336	-	334	-	334	-
2013/14	339	+1%	335	+<1%	336	+1%
2014/15	343	+1%	337	+1%	340	+1%
2015/16	338	-1%	356	-6%	346	+2%
2016/17	330	-2%	341	-4%	335	-3%
2017/18	337	+2%	356	+4%	346	+3%

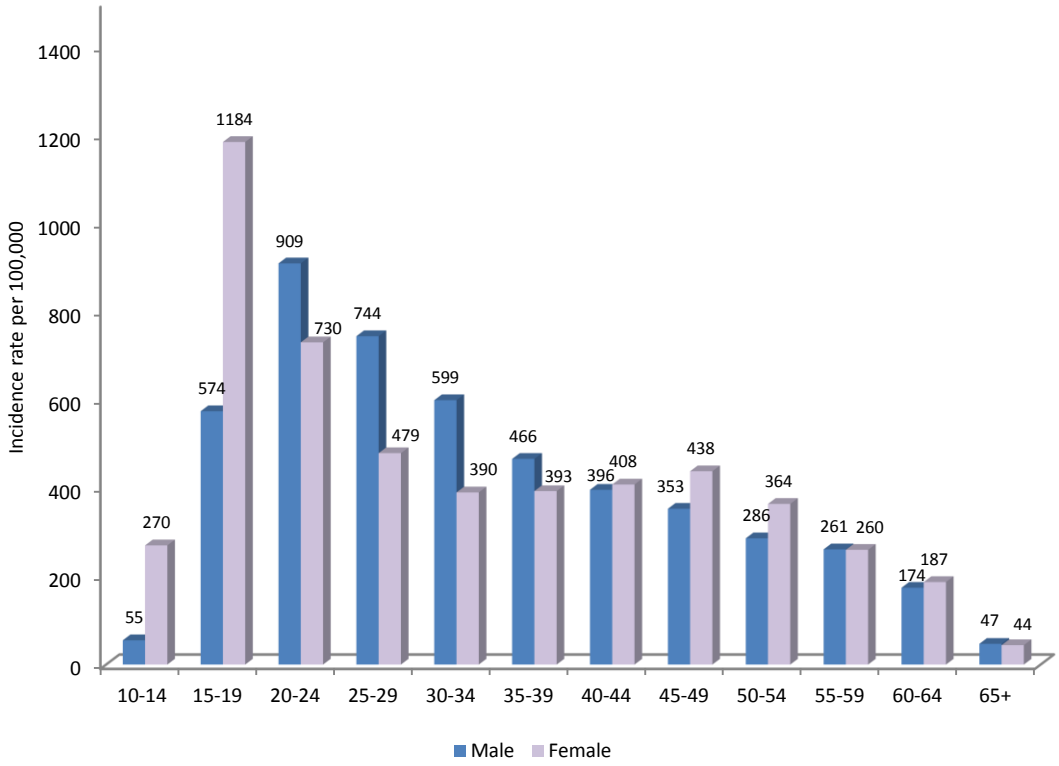
Figure 14 European age-standardised rate (EASR) of persons presenting to hospital in Northern Ireland following self-harm by gender, 2012/13 to 2017/18.



In 2017/18 the highest rate of self-harm in Northern Ireland was observed among 15-19 year-old females and 20-24 year old males, with peak rates of 1,184 per 100,000 for females and 909 per 100,000 for males in these age groups (see Figure 15).

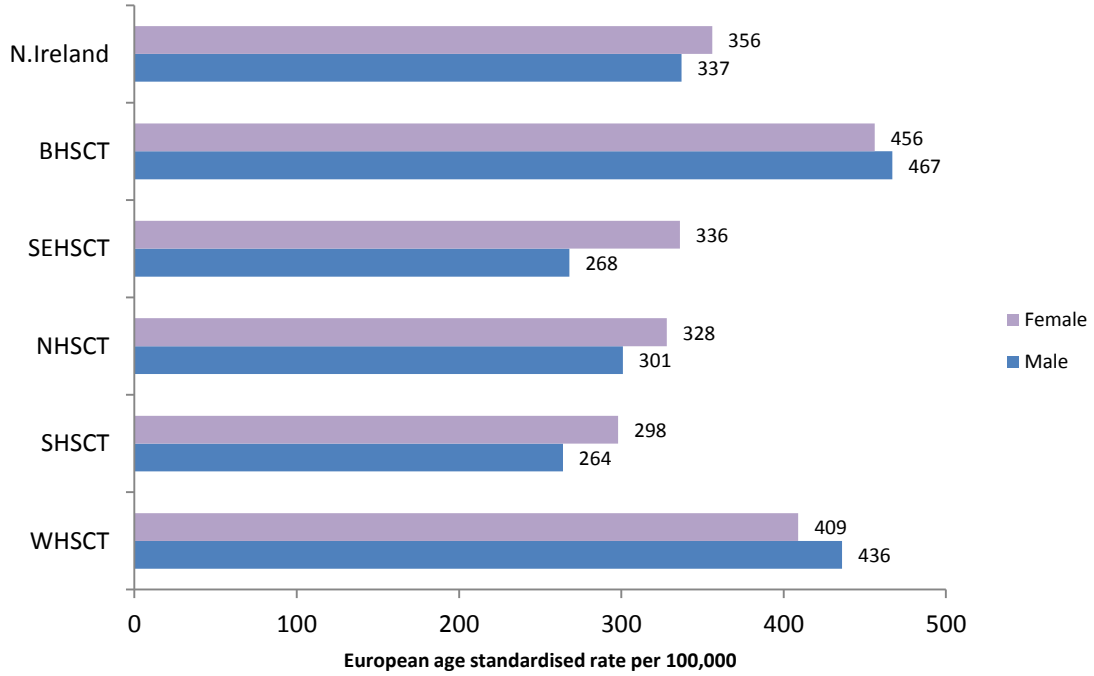
The female rate of self-harm among 15-19 year-olds was more than twice the male rate for this age group. The female rate was also higher among 45-54 year-olds (+26%). However the male rate of self-harm was, on average, 55% higher among those aged 25-29 years (744 vs. 479 per 100,000).

Figure 15 Incidence rate of self-harm per 100,000 in Northern Ireland by age and gender, 2017/18.



For both males and females the highest rates of self-harm were observed in the Belfast HSCT area (467 and 456 per 100,000, respectively): 39% and 28% higher than the male and female rates for Northern Ireland, respectively. The lowest rate of self-harm for both male and female residents were recorded in the Southern HSCT area, where the male rate (264 per 100,000) was 22% lower than the regional male rate, and the female rate (298 per 100,000) was 16% lower than the regional female rate (see Figure 16). The rate for males exceeded the rate for females in BHSCT and WHSCT, while higher female rates were recorded for SEHSCT, NHSCT and SHSCT.

Figure 16 European age standardised rate of self-harm, all ages per 100,000 by gender and HSCT area in Northern Ireland, 2017/18.



Section 5: Ideation presentations

5.1 Number of ideation presentations to EDs in Northern Ireland

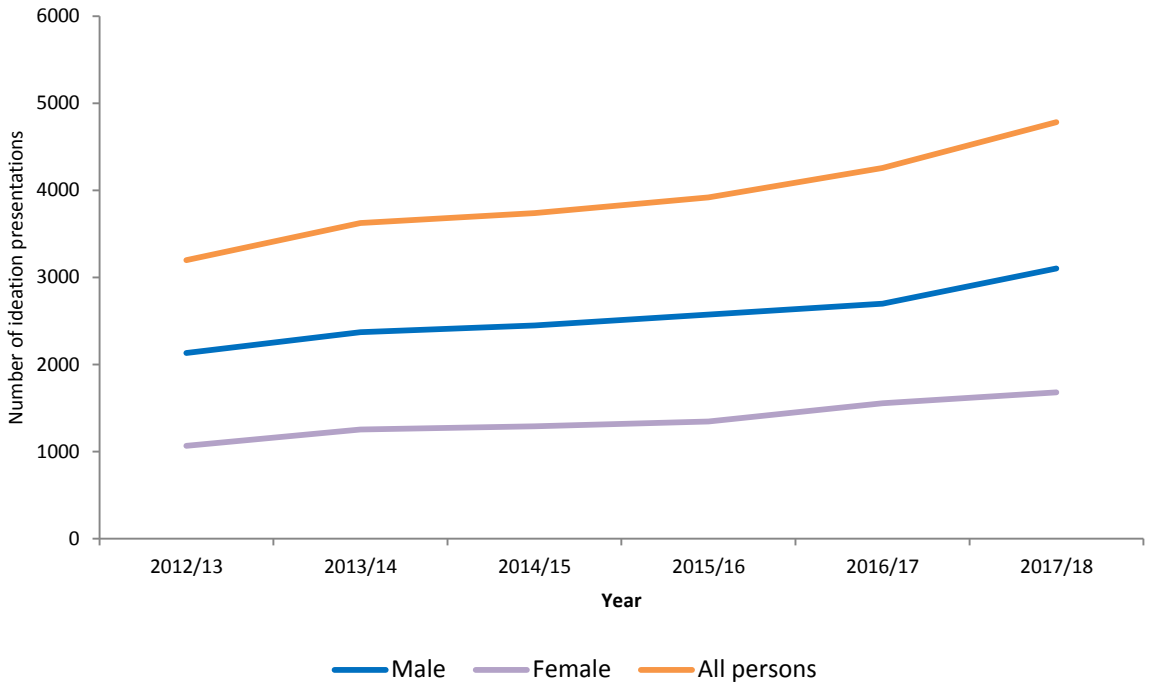
Data were also obtained on presentations to EDs that reported ideation. Ideation was recorded where the individual presented due to thoughts of self-harm and/ or suicide, but where no act had taken place.

There were 4,784 ideation presentations recorded during 2017/18 (Table 21). A larger proportion of ideation presentations were attributable to males (65%), in contrast to the more even gender balance among self-harm presentations. The number of ideation presentations has increased by 50% between 2012/13 and 2017/18 (46% for males and 57% for females).

Table 21 Number of ideation presentations to EDs in Northern Ireland, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All	
Year	Number	% change from previous year	Number	% change from previous year	Number	% change from previous year
2012/13	2,131	-	1,068	-	3,199	-
2013/14	2,371	+11%	1,253	+17%	3,624	+13%
2014/15	2,449	+3%	1,291	+3%	3,740	+3%
2015/16	2,575	+5%	1,345	+4%	3,920	+5%
2016/17	2,699	+5%	1,556	+16%	4,255	+9%
2017/18	**3,102**	**+15%**	**1,682**	**+8%**	**4,784**	**+12%**

Figure 17 Number of ideation presentations to EDs in Northern Ireland, 2012/13 to 2017/18



These 4,784 ideation presentations were made by 3,310 individuals (2,076 males and 1,234 females), Table 22.

Table 22 Individual persons presenting with ideation to EDs in Northern Ireland, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All persons	
Year	Number	% change from previous year	Number	% change from previous year	Number	% change from previous year
2012/13	1,476	-	823	-	2,299	-
2013/14	1,657	+12%	959	+17%	2,616	+14%
2014/15	1,673	+1%	945	-1%	2,618	+<1%
2015/16	1,745	+4%	984	+4%	2,729	+4%
2016/17	1,804	+3%	1,112	+13%	2,916	+7%
2017/18	**2,076**	**+15%**	**1,234**	**+11%**	**3,310**	**+14%**

5.2 Ideation repetition

The repetition rates for ideation are higher for males than females as detailed in Table 23 below. During 2017/18, 21% of males made at least one repeat act of ideation within the 12 months compared to 18% of females. There has been a slight decrease in repetition rates for ideation between 2016/17 and 2017.18.

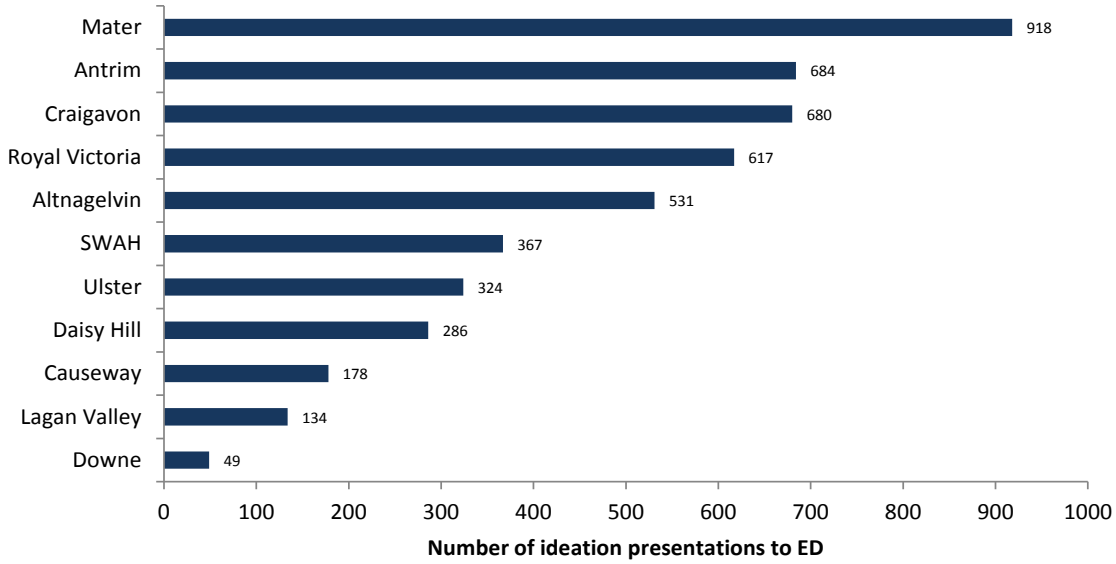
Table 23 Ideation repetition rate within 12 months, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All Presentations	
Year	Repetition Rate	% change from previous year	Repetition Rate	% change from previous year	Repetition Rate	% change from previous year
2012/13	19.7%	-	17.5%	-	18.9%	-
2013/14	20.2%	+0.5%	18.0%	+0.5%	19.4%	+0.5%
2014/15	20.6%	+0.4%	17.2%	-0.8%	19.4%	-
2015/16	21.0%	+0.4%	18.5%	+1.3%	20.1%	+0.7%
2016/17	21.4%	+0.4%	18.8%	+0.3%	20.4%	+0.3%
2017/18	**20.7%**	**-0.7%**	**17.9%**	**-0.9%**	**19.6%**	**-0.8%**

5.3 Ideation presentations by hospital EDs in Northern Ireland

The Mater Hospital recorded the highest number of ideation presentations in 2017/18, accounting for 19% (n=918) of total presentations, followed by Antrim and Craigavon Hospitals with a 14% share each (n=684 and 680, respectively) of presentations. Excluding the Royal Hospital for Sick Children, Downe Hospital had the lowest share of presentations (1%; n=49). The distribution of ideation presentations between hospitals is summarised in Figure 18.

Figure 18 Number of ideation presentations by hospital ED, 2017/18.



**This graph omits the Royal Hospital for Sick Children due to small identifiable numbers*

5.4 Ideation presentations by Health and Social Care Trust (HSCT) in Northern Ireland

The largest number of ideation presentations were recorded in the Belfast HSCT area (n=1,551), accounting for 32% of all ideation presentations made during 2017/18, despite a 19% population share (Table 24). The South Eastern HSCT area had the lowest proportion of ideation presentations (11%). The Northern HSCT area had an 18% share of ideation presentations despite having a larger population share (25%).

Table 24 Ideation presentations share by HSCT, 2017/18.

	BHSCT	SEHSCT	NHSCT	SHSCT	WHSCT	Northern Ireland
Hospital based ideation presentations	1,551	507	862	966	898	4,784
% share of ideation presentations	32%	11%	18%	20%	19%	100%
% of NI population resident in Trust*	19%	19%	25%	20%	16%	100%

**NISRA 2017 Mid-Year Estimate Resident Population*

Overall patients presented with ideation to a hospital within their Trust of residence. Almost one-third (31%) of South Eastern HSCT residents presenting with ideation did so to a hospital in the Belfast HSCT area, as did 11% of NHSCT residents. In the Belfast HSCT area, 9% of residents presented to a SEHSCT hospital (Table 25).

Table 25 Ideation presentations by resident HSCT area and presenting hospital location, 2017/18.

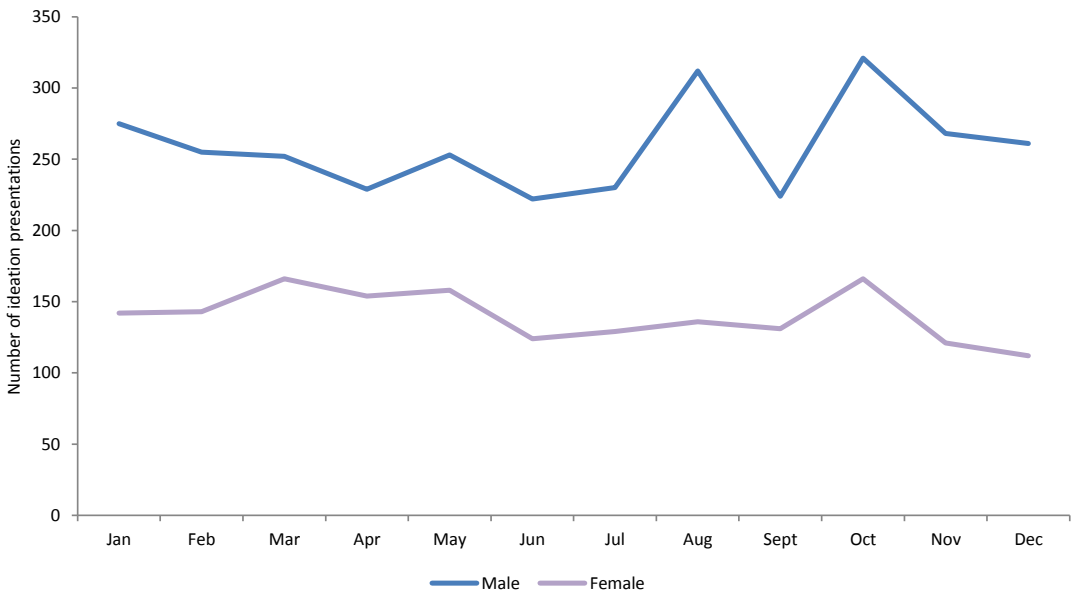
Ideation presentations		Presenting hospital location					
		BHSCT Hospitals	SEHSCT Hospitals	NHSCT Hospitals	SHSCT Hospitals	WHSCT Hospitals	Total
Resident Trust Area	BHSCT	**89.6%**	8.8%	1.0%	<1%	<1%	**100%**
	SEHSCT	31.0%	**63.5%**	<1%	5%	<1%	**100%**
	NHSCT	10.9%	<1%	**85.7%**	2.6%	<1%	**100%**
	SHSCT	1.6%	1.1%	<1%	**94.6%**	2.4%	**100%**
	WHSCT	<1%	0%	2.1%	<1%	**96.9%**	**100%**

5.5 Ideation presentations by time of occurrence

Variation by month

The monthly average number of ideation presentations to hospitals in 2017/18 was 399. The month of June saw the fewest ideation presentations to ED at 345 (14% below average) while the peak month was October at 487 (22% above average), Figure 19.

Figure 19 Number of ideation presentations by month of attendance and gender, 2017/18.



Variation by day and time of attendance

In 2017/18, an average of 13 presentations involving ideation were recorded per day. Similar to self-harm presentations, data shows that the number of ideation presentations was highest at weekends. Considering presentations made on weekdays (Monday to Friday), 32% were made

between the hours of 9am and 5pm, with 29% made between 5pm and 10pm and 39% between 10pm and 9am. For presentations at the weekend (Saturday and Sunday), 26% occur between 5pm and 10pm and a further 48% occur between the hours of 10pm and 9am (Table 26).

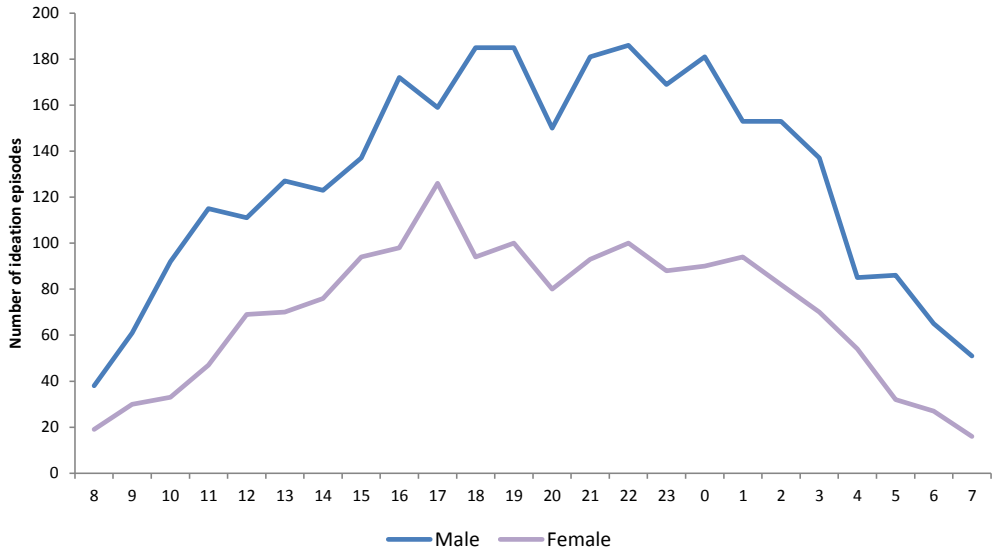
Table 26 Day and time of attendance, ideation episodes, 2017/18.

Northern Ireland			
Year	Mon-Fri	Sat-Sun	Total Mon-Sun
9am until 5pm	1,077 (32.2%)	378 (26.3%)	**1,455 (30.4%)**
5pm until 10pm	982 (29.3%)	371 (25.8%)	**1,353 (28.3%)**
10pm until 9am	1,288 (38.5%)	688 (47.9%)	**1,976 (41.3%)**
Total	3,347 (100%)	1,437 (100%)	**4,784 (100%)**

Variation by hour

As with self-harm presentations there was an increase in the frequency of ideation attendances over the course of the day however ideation patients present earlier in the evening than self-harm patients. The peak hour of attendance for males was 10pm and female presentations peaked at 5pm.

Figure 20 Number of ideation presentations by time of occurrence and gender, 2017/18.



5.6 Recommended next care following ideation

As outlined in Table 27, approximately one-quarter (24%) of ideation presentations resulted in admission to a general ward following presentation to an ED, with 8% admitted to a psychiatric ward. Most commonly, ideation presentations were discharged from the ED following treatment (57%). One in ten presentations due to ideation resulted in the patient leaving the ED without being seen (5%) or before a next care recommendation could be made (5%).

Table 27 Recommended next care following ideation attendance to hospital, 2012/13 to 2017/18.

Next care	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
General admission	995 (31%)	1,173 (32%)	1,161 (31%)	1,027 (26%)	988 (23%)	**1,165 (24%)**
Psychiatric admission	314 (10%)	323 (9%)	302 (8%)	346 (9%)	389 (9%)	**373 (8%)**
Refused admission	61 (2%)	43 (1%)	34 (1%)	36 (1%)	40 (1%)	**33 (1%)**
Left ED before decision made regarding next care	110 (3%)	138 (4%)	135 (4%)	153 (4%)	193 (5%)	**224 (5%)**
Left ED without being seen	426 (13%)	438 (12%)	359 (10%)	297 (8%)	214 (5%)	**248 (5%)**
Discharged from ED following treatment	1,293 (40%)	1,509 (42%)	1,749 (47%)	2,061 (53%)	2,431 (57%)	**2,741 (57%)**

Variation in recommended next care was observed across HSCT areas (Table 28). The lowest rates of admission to hospital (both general and psychiatric) were observed in the Belfast HSCT (19%), with the highest recorded in the Southern HSCT (48%). These variations may reflect differences in the balance of inpatient / community based psychiatric services between Trusts.

Table 28 Recommended next care following ideation attendance to hospital by HSCT area, 2017/18.

Next care	BHSCT n=(1,551)	SEHSCT n=(507)	NHSCT n=(862)	SHSCT n=(966)	WHSCT n=(898)	Northern Ireland n=(4,784)
General admission	249 (16%)	86 (17%)	268 (31%)	377 (39%)	185 (21%)	**1,165 (24%)**
Psychiatric admission	51 (3%)	41 (8%)	47 (6%)	89 (9%)	145 (16%)	**373 (8%)**
Refused admission	<10 (<1%)	<10 (<1%)	<10 (<1%)	13 (1%)	<10 (<1%)	**33 (1%)**
Left ED before decision made regarding next care	63 (4%)	15 (3%)	32 (4%)	28 (3%)	86 (10%)	**224 (5%)**
Left ED without being seen	145 (9%)	<10 (<2%)	33 (4%)	32 (3%)	31 (4%)	**248 (5%)**
Discharged from ED following treatment	1,038 (67%)	354 (70%)	479 (56%)	427 (44%)	443 (49%)	**2,741 (57%)**

Belfast HSCT had the highest proportion of presentations leaving the ED without being seen (9%) and in the Western trust 10% of ideation presentations left the ED before a next care recommendation could be made.

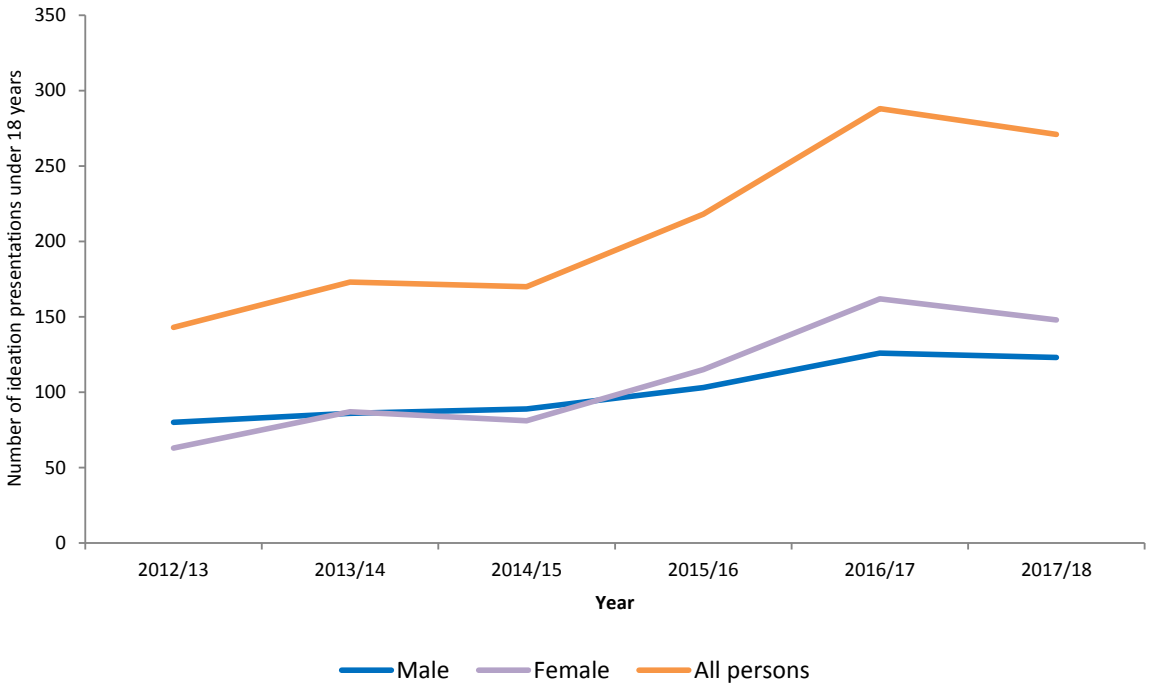
5.7 Ideation behaviour in young people (under 18 years)

Ideation presentations by those under 18 years of age contributed to 6% (n=271) of all ideation presentations to EDs in Northern Ireland during 2017/18 (Table 29). There was a reduction of 6% in ideation presentations between 2016/17 and 2017/18 but prior to this there was an increasing trend. (Figure 21).

Table 29 Number of ideation presentations by young people under 18 years, 2012/13 to 2017/18.

Northern Ireland	Male <18 yrs		Female < 18 yrs		All Presentations <18 yrs	
Year	Number	% difference from previous year	Number	% difference from previous year	Number	% difference from previous year
2012/13	80	-	63	-	143	-
2013/14	86	+8%	87	+38%	173	+21%
2014/15	89	+4%	81	-7%	170	-2%
2015/16	103	+16%	115	+42%	218	+28%
2016/17	126	+22%	162	+41%	288	+32%
2017/18	**123**	**-2%**	**148**	**-9%**	**271**	**-6%**

Figure 21 Number of ideation presentations by young people under 18 years, 2012/13 to 2017/18.



For ideation presentations by those under 18 years of age, two-thirds (64%) were discharged from the ED following treatment, with 28% admitted to a general ward in the presenting hospital (Table 30). Fewer than 2% of presentations left the ED without being seen.

Considering the period 2012-2018, although there is some year to year variation there is some evidence of reduction in the proportion admitted to the general hospital with a trend towards a greater proportion of cases being managed in the ED.

Table 30 Recommended next care following ideation attendance to hospital, under 18 years, 2012/13 to 2017/18.

Next Care	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
General admission	51 (36%)	60 (35%)	72 (42%)	54 (25%)	69 (24%)	**75 (28%)**
Psychiatric admission	<10 (<7%)	<10 (<3%)	<10 (<6%)	<10 (<5%)	<10 (<3%)	**<10 (<4%)**
Refused admission	0 (0%)	<10 (<2%)	0 (0%)	0 (0%)	<10 (<1%)	**<10 (<1%)**
Left ED before decision made regarding next care	<10 (<1%)	<10 (<1%)	0 (0%)	<10 (<3%)	<10 (<2%)	**<10 (<3%)**
Left ED without being seen	10 (7%)	<10 (<6%)	<10 (<6%)	<10 (<3%)	<10 (<4%)	**<10 (<2%)**
Discharged from ED following treatment	72 (50%)	97 (56%)	80 (47%)	143 (66%)	198 (69%)	**173 (64%)**

5.8 Key subgroup analysis

Homeless

Of all ideation presentations, 92% (n=4,397) involved persons living in private residence. Approximately 8% (n=382) cases involved persons who were homeless at the time of attendance. The majority (74%) of these were male (n=284) and presented to hospitals in Belfast HSCT (67%; n=254). Almost half of those who were homeless were aged between 25-44 years.

Residential children's homes

There were fewer than 10 ideation presentations made by residents of residential children's homes (<1%).

5.9 Incidence rates of Ideation

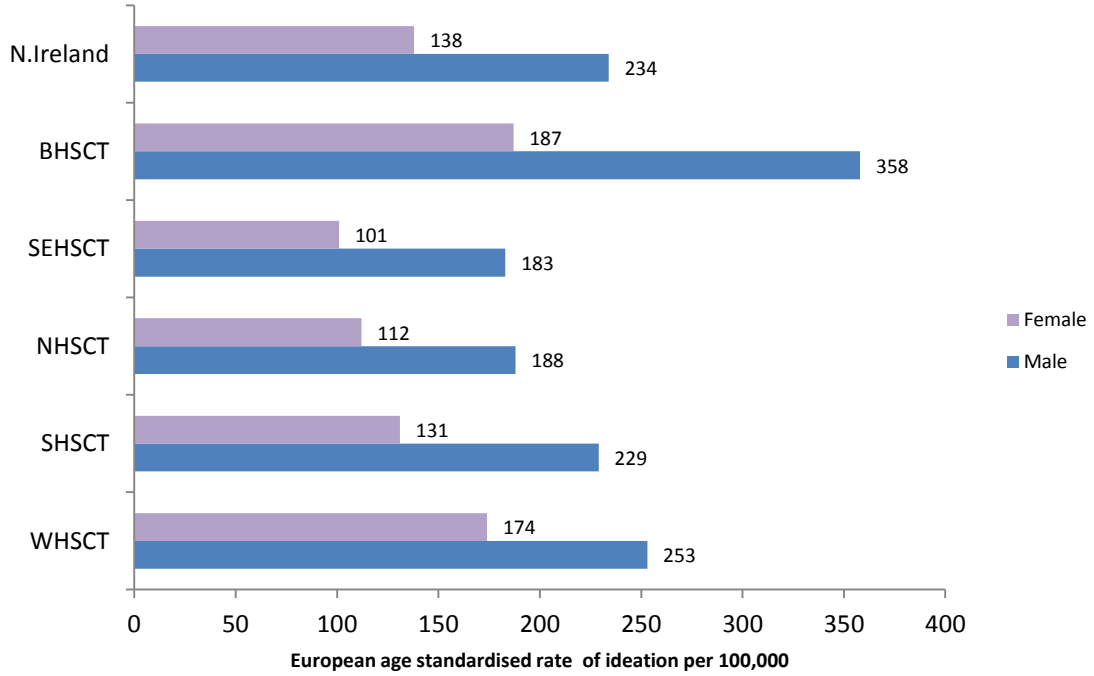
The age standardised rate of ideation in 2017/18 for Northern Ireland was 186 per 100,000 – 234 per 100,000 for males and 138 per 100,000 for females. The rate in 2017/18 was 45% higher than in 2012/13 (128 per 100,000). There was an increase in male and female rates over this time period of 40% and 52% respectively.

Table 31 European age-standardised rate (EASR) of persons presenting to hospital in Northern Ireland following ideation, 2012/13 to 2017/18.

Northern Ireland	Male		Female		All	
Year	Rate	% change from previous year	Rate	% change from previous year	Rate	% change from previous year
2012/13	167	-	91	-	128	-
2013/14	188	+13%	106	+16%	147	+15%
2014/15	189	+1%	105	-1%	147	-
2015/16	198	+5%	110	+5%	153	+4%
2016/17	204	+3%	123	+12%	163	+7%
2017/18	**234**	**+15%**	**138**	**+12%**	**186**	**+14%**

For both males and females the highest rates of ideation were observed in the Belfast HSCT area (358 and 187 per 100,000 respectively): 53% and 36% higher than the male and female rates for Northern Ireland, respectively. The lowest rate of ideation for both males and female residents were recorded in the South Eastern HSCT area, where the male rate (183 per 100,000) was 22% lower than the regional male rate and the female rate (101 per 100,000) was 27% lower than the regional female rate. The male rate exceeded the rate for females in all HSCT areas (Figure 22).

Figure 22 European age standardised rate of ideation, all ages per 100,000 by gender and HSCT area in Northern Ireland, 2017/18.



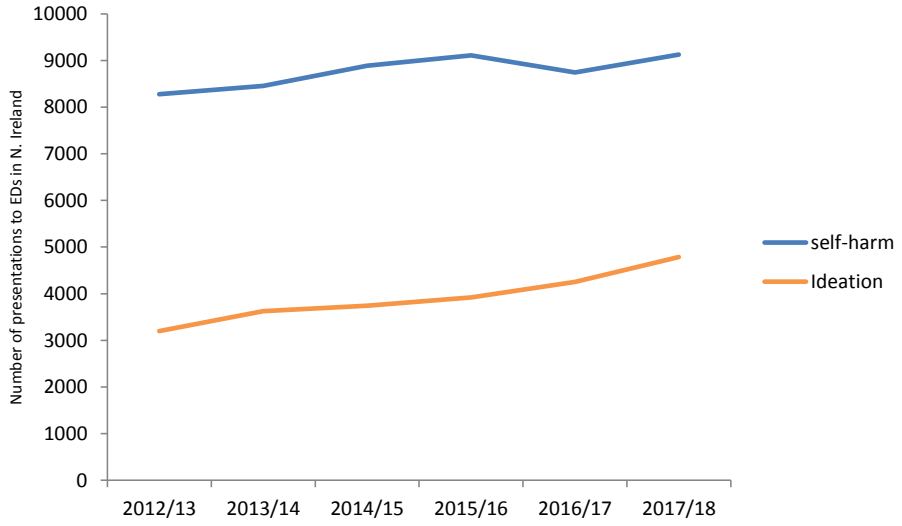
Section 6: Total self-harm and ideation presentations

6.1 Self harm and ideation presentations to EDs in Northern Ireland combined

The total number of self-harm and ideation attendances to EDs in Northern Ireland during 2017/18 was 13, 911. This represents almost 2% of all ED attendances during 2017/18 highlighting the importance of ED staff being skilled in this area and having good referral pathways in place with mental health services. Almost half (45%) of these presentations occurred between 10pm and 9am.

Three quarters of presentations were due to self-harm (n=9,127) and there were 4,784 ideation attendances.

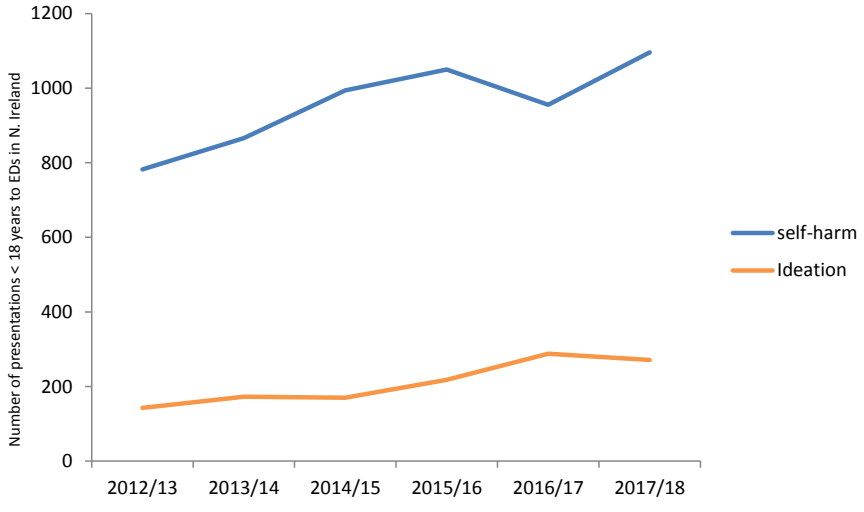
Figure 23 Number of self-harm and ideation presentations to EDs in Northern Ireland, 2012/13 to 2017/18



6.2 Number of presentations to EDs in Northern Ireland by young people (under 18 years)

In 2017/18 there was a total of 1,367 presentations to EDs by young people for self-harm and ideation. Self-harm accounted for 80% of attendances (n=1,096) and there were 271 ideation presentations.

Figure 24 Number of self-harm and ideation presentations by young people under 18 years, to EDs in Northern Ireland, 2012/13 to 2017/18



6.3 Next care following self-harm and ideation presentations combined.

Considering both self-harm and ideation presentations together it can be seen that half (50%) of all attendances are managed within the ED and do not require admission (Table 32). One in three cases (34%) are admitted to the general hospital and 6% to a psychiatric ward. A considerable proportion leave the ED prematurely before their care has been completed (8%).

Table 32 Next care following self-harm and ideation presentations combined, 2017/18.

Next Care	Self-harm	Ideation	Combined	%
General admission	3,619	1,165	4,784	**34%**
Psychiatric admission	521	373	894	**6%**
Refused admission	82	33	115	**1%**
Left ED before decision made regarding next care	346	224	570	**4%**
Left ED without being seen	279	248	527	**4%**
Discharged from ED following treatment	4,280	2,741	7,021	**50%**
Total	**9,127**	**4,784**	**13,911**	**100%**

6.4 Referral for specialist mental health assessment.

National guidelines for self-harm recommend, that all patients who self-harm should be offered a psychosocial assessment. There are no similar guidelines for presentations following ideation. Emergency department clinicians undertake a preliminary assessment and will usually offer the patient a referral to mental health services for a more comprehensive assessment. The Registry captures data in relation to mental health assessments conducted in the ED as well as referral for specialist mental health assessments (Table 33). For the majority of presentations, individuals received an assessment in the ED or, where it was not appropriate at the time, referred for an assessment.

Table 33: Documented evidence of referral for assessment in ED notes, 2017-18.

	Self-harm	Ideation
Documented evidence of referral for assessment in ED notes	81%	90%

Section 7: Regional variations of self-harm across HSCT areas

7.1 Self-harm rate

- The highest rates of self-harm in Northern Ireland were recorded for both male and female residents of the Belfast HSCT area, at 467 per 100,000 and 456 per 100,000, respectively. The male rate was 39% higher than the equivalent rate for Northern Ireland, while the female rate was 28% higher.
- The Western HSCT area also had rates of self-harm higher than the regional average. The male rate (436 per 100,000) was 29% higher, while the female rate (409 per 100,000) was 15% higher.
- The rate of self-harm among residents of the Southern HSCT area was 22% lower for males (264 per 100,000) and 16% lower for females (298 per 100,000).
- The rate of self-harm for Northern HSCT area residents were 11% and 8% lower for males (301 per 100,000) and females (328 per 100,000), respectively.
- Finally, for residents of the South Eastern HSCT area, the female rate was 6% lower (336 per 100,000). The male rate was 20% lower than that recorded regionally (268 per 100,000).
- Across all HSCT areas the peak self-harm rate among female residents was for 15-19 year-olds (1,617 per 100,000 for Belfast; 1,342 per 100,000 for South Eastern; 1,260 per 100,000 for Western; 1,089 per 100,000 for Southern; 903 per 100,000 for Northern).
- Similarly, the majority of HSCT areas recorded the highest male rates among those aged 20-24 years (1,215 per 100,000 for Western; 940 per 100,000 for Northern; 806 per 100,000 for South Eastern; 673 per 100,000 for Southern). Belfast HSCT recorded the highest male rate among those aged 25 – 29 years (1,072 per 100,000).

7.2 Methods

- An increased proportion of self-harm presentations involving an intentional drug overdose was observed among presentations made to hospitals in the Belfast and Northern Trusts (67% and 66% respectively) compared to a regional average of 64%. Intentional drug overdose was involved in 64% of self-harm presentations in the Southern Trust, 62% in the Western Trust and 61% in the South Eastern Trust areas.
- Presentations made to hospitals in the Western HSCT area were more likely to involve alcohol (47% vs. 44% regionally). Alcohol was involved in 44% of self-harm presentations to hospitals in the Belfast, Northern and Southern Trust areas and the lowest involvement of alcohol was recorded in the South Eastern Trust area at 39%.
- Self-cutting was involved in 32% of self-harm presentations to hospitals in the South Eastern area compared to 30% regionally. The Western area recorded a lower percentage (25%). Self-cutting was involved in 31% of presentations in the Southern Trust, 30% in the Belfast Trust and 29% in the Northern Trust.
- The proportion of self-harm presentations involving attempted drowning varied by HSCT area from 1% in BHSCT to 14% in WHSCT. The regional average in 2017/18 was 4%. Attempted drowning was involved in 2% of self-harm presentations to each of the SEHSCT, NHSCT and SHSCT areas.

7.3 Recommended next care

- Recommended next care varied significantly by HSCT area, with the proportion of patients who left the ED without being seen varying from 1% in the South Eastern HSCT to 6% in the Belfast HSCT (Table 11, page 31).
- Across HSCT area, general admission was recommended for 30% of self-harm patients in the South Eastern, 34% in the Belfast, 39% in the Western, 48% in the Southern and 49% in the Northern HSCT.
- General admission rates varied for those aged under 18 years, from 29% in the Belfast, 34% in the South Eastern and 46% in the Western, to 47% in the Northern and 52% in the Southern HSCT.
- Among those aged under 18 years, the proportion of presentations leaving the ED without being seen was highest in the Southern HSCT area (2.5% vs. 1.5%, regionally). This ranged from 2% in Belfast HSCT, 1% in both South Eastern and Western HSCT areas and <1% in the Northern HSCT.

7.4 Ideation

- The highest rate of ideation was recorded in BHSCT (271 per 100,000) followed by WHSCT (213 per 100,000). The regional average was 186 per 100,000 (Figure 22, page 50).
- The proportion of ideation presentations admitted to a general ward ranged from 16% in the Belfast HSCT to 39% in the Southern HSCT (Table 27, page 47).
- The lowest proportion of psychiatric admission was observed in the Belfast HSCT area (3%) while the highest was recorded in the Western HSCT (16%).
- Belfast HSCT had the highest proportion of ideation presentations leaving the ED without being seen (9%). This proportion was lowest for the South Eastern HSCT (<1%).
- General admission rates among those aged under 18 years ranged from 11% in the Belfast HSCT, 14% in the South Eastern HSCT, 34% in the Northern HSCT, 40% in the Western HSCT, and 41% in the Southern HSCT.

End

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