National Registry of Deliberate Self Harm Ireland

EXECUTIVE SUMMARY

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National Suicide Research Foundation
This is the eleventh annual report from the National Registry of Deliberate Self Harm. It is based on data collected on persons presenting to hospital emergency departments as a result of deliberate self-harm in 2012 in the Republic of Ireland. The Registry had near complete coverage of the country’s hospitals for the period 2002-2005 and, since 2006, all general hospital and paediatric hospital emergency departments in the Republic of Ireland have contributed data to the Registry.

In 2012, the Registry recorded 12,010 presentations to hospital due to deliberate self-harm nationally, involving 9,483 individuals. Taking the population into account, the age-standardised rate of individuals presenting to hospital following deliberate self-harm in 2012 was 211 per 100,000, a 2% decrease on the rate in 2011. This decrease follows a 4% decrease in the rate of persons presenting to hospital following deliberate self-harm in Ireland from 2010 to 2011. However, the rate in 2012 was still 12% higher than that in 2007.

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In 2012, the only significant changes in the rate of hospital-treated deliberate self-harm by age were among males aged 15-19 and females aged 35-39. The male rate for those aged 15-19 fell by 14% from 2011, from 430 to 368 per 100,000. The female rate for those aged 35-39 fell by 13%, from 279 to 243 per 100,000. Rates of self-harm in other age groups remained similar to 2011. As in previous years, the female rate was higher than the male rate but the gender difference has narrowed from 37% in 2004-2005 to 17% in 2012. The peak rate for women was in the 15-19 years age group, at 617 per 100,000, whereas the peak rate among men was in 20-24 year-olds at 533 per 100,000. Rates of self-harm in other age groups remained similar to 2011.

In 2012, there was widespread variation in the male and female deliberate self-harm rate when examined by city/county of residence. The male rate varied from 107 per 100,000 for Galway County to 469 per 100,000 for Limerick City. The lowest and highest female rate was recorded for Monaghan and Limerick City residents at 141 and 528 per 100,000, respectively.
100,000, respectively. Relative to the national rate, a high rate of deliberate self-harm was recorded for male and female city residents and for men living in Louth and Kerry and for women living in South Dublin, Wexford and Leitrim. In 2012, the highest rates for both men and women were seen in Limerick City, where both rates were more than twice the national rate. In Cork City, the male rate was almost twice the national rate and for women the rate of deliberate self-harm was 43% higher than the national rate.

Between 2011 and 2012, the national rate of hospital-treated deliberate self-harm decreased by 5% for men, while it increased by 1% for women. The most notable decreases among men were observed in Galway County (-26%), Cavan (-25%), Carlow (-24%), Limerick County (-23%) and Cork City (-20%), while increases were observed in Longford (+34%) and Leitrim (+46%). The female rate fell significantly in Carlow (-18%), Laois (-22%) and Cavan (-18%). Significant increases in the female rate of self-harm were observed in Limerick City (+27%), Leitrim (+65%) and Roscommon (+68%). The rate of self-harm among female Waterford City residents increased two-fold (+106%) in 2012 – from a rate of 166 per 100,000 in 2011 to 342 per 100,000 in 2012.

Despite a decrease in the number of presentations in 2012 from 2011, the proportion of acts accounted for by repetition in 2012 (21.0%) was higher than that in 2010 or 2011, and similar to the years 2003-2009 (range: 20.5-23.1%). This confirms that repetition continues to pose a major challenge to hospital staff and family members involved.
At least five deliberate self-harm presentations were made by 118 individuals in 2012, accounting for just 1% of all deliberate self-harm patients in the year but 8% of all deliberate self-harm presentations recorded. 24 individuals made ten or more presentations in 2012, representing 3% of all presentations. Self-cutting was associated with an increased level of repetition. Almost one in five of those who used cutting as their main method of self-harm in their index act made at least one subsequent deliberate self-harm presentation in the calendar year compared to just over one in eight of those who took a drug overdose. Risk of repetition was greatest in the days and weeks following a deliberate self-harm presentation to hospital and the risk increased markedly with each subsequent presentation.

While overall the rate of repetition in one year was similar for men and women (14.3% vs. 14.6%), repetition rates by gender did vary by LHO area. The largest gender differences in the rate of repetition were observed in those LHO areas with the highest repetition rates. Repetition of self-harm is a strong predictor of future suicide, and so the correlation between rates of repetition and suicide rates by region warrants further investigation.

Figure 4: Rate of repeated presentation to hospital following a deliberate self-harm presentation in 2012 by gender, age group, method of self-harm, recommended next care and by the number of the self-harm presentation.
Drug overdose was the most common method of self-harm, involved in 69% of all acts registered in 2012, and more so in women (75%) than in men (62%). Minor tranquillisers, paracetamol-containing medicines and anti-depressants/mood stabilisers were involved in 41%, 28% and 22% of drug overdose acts. The number of deliberate self-harm presentations to hospital involving drug overdose in 2012 (8,284) represented a slight decrease on the numbers recorded in 2011 and 2010 (2%). This was also true when examined by type of drug. The exception was paracetamol-only medication, which saw a rise of 6% on the 2011 figures. This rise was due to female presentations (11% increase), while male presentations involving paracetamol fell by 2%. Most notably, there was a reduction in the number of self-harm presentations involving minor tranquillisers by 7% from 2011. This reduction was more prominent among cases of self-harm by men compared to women (11% and 4%, respectively).

Attempted hanging was involved in 7% of all deliberate self-harm presentations (10% for men and 3% for women). At 776, the number of presentations involving attempted hanging has increased significantly by 6% from 2011 (n=734). This is the greatest number of deliberate self-harm presentations involving hanging recorded by the Registry and is 75% higher than the number recorded in 2007 (n=444).

Cutting was the only other common method of self-harm, involved in 23% of all episodes and was significantly more common in men (26%) than women (21%). Unlike previous years, the treatment following self-cutting was similar for both women and men. 30% of presentations involving self-cutting required no treatment, 30% required steristrips, 21% received sutures, while 4% were referred for plastic surgery.

Alcohol was involved in 38% of all cases. While overall alcohol involvement decreased slightly from 2011, alcohol was significantly more often involved in male episodes of self-harm than female episodes (42% versus 36%, respectively). Alcohol may be one of the factors underlying the pattern of presentations with deliberate self-harm by time of day and day of week. Presentations peaked in the hours around midnight and almost one-third of all presentations occurred on Sundays and Mondays. In addition, the Registry identified an increased number of self-harm presentations to hospital associated with some public holidays.

<table>
<thead>
<tr>
<th></th>
<th>Overdose</th>
<th>Alcohol Poisoning</th>
<th>Hanging</th>
<th>Drowning</th>
<th>Cutting</th>
<th>Other</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>3418</td>
<td>2303</td>
<td>148</td>
<td>573</td>
<td>208</td>
<td>1420</td>
<td>357</td>
</tr>
<tr>
<td></td>
<td>(61.8%)</td>
<td>(41.6%)</td>
<td>(2.7%)</td>
<td>(10.4%)</td>
<td>(3.8%)</td>
<td>(25.7%)</td>
<td>(6.5%)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>4866</td>
<td>2307</td>
<td>116</td>
<td>203</td>
<td>141</td>
<td>1347</td>
<td>259</td>
</tr>
<tr>
<td></td>
<td>(75.1%)</td>
<td>(35.6%)</td>
<td>(1.8%)</td>
<td>(3.1%)</td>
<td>(2.2%)</td>
<td>(20.8%)</td>
<td>(4%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8284</td>
<td>4610</td>
<td>264</td>
<td>776</td>
<td>349</td>
<td>2767</td>
<td>616</td>
</tr>
<tr>
<td></td>
<td>(69%)</td>
<td>(38.4%)</td>
<td>(2.2%)</td>
<td>(6.5%)</td>
<td>(2.9%)</td>
<td>(23%)</td>
<td>(5.1%)</td>
</tr>
</tbody>
</table>

Table 3: Methods of self-harm involved in presentations to hospital in 2012.
Next care varied significantly by HSE hospitals group. The proportion of deliberate self-harm patients who left before a recommendation was made varied from 6% in the Southern Hospitals Group to 19% in the Dublin North East Hospitals Group. Inpatient care (irrespective of type and whether the patient refused) varied from 24% of the patients treated in North Eastern and 25% in Dublin North East to 58% in the South Eastern Hospitals Group. Overall, direct psychiatric and general admissions were almost equally common in Dublin South and Dublin North East whereas general admissions were far more common than direct psychiatric admissions in South Eastern, Mid-Western, Dublin/ Midlands and North Eastern Hospital Groups. The variation in recommended next care is likely to be due to variation in the availability of resources and services but it also suggests that assessment and management procedures with respect to deliberate self-harm patients is likely to be variable and inconsistent across the country.

<table>
<thead>
<tr>
<th>HSE Dublin / Mid-Leinster</th>
<th>HSE Dublin / North East</th>
<th>HSE South</th>
<th>HSE West</th>
<th>Republic of Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dublin/ Midlands (n=1814)</td>
<td>Dublin South (n=1623)</td>
<td>Dublin North East (n=2050)</td>
<td>North Eastern (n=941)</td>
</tr>
<tr>
<td>General admission</td>
<td>37.9%</td>
<td>16.8%</td>
<td>13.9%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Psychiatric admission</td>
<td>9%</td>
<td>17.9%</td>
<td>10.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Patient would not allow admission</td>
<td>1.1%</td>
<td>0.3%</td>
<td>0.8%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Left before recommendation</td>
<td>11.6%</td>
<td>15%</td>
<td>19%</td>
<td>14.2%</td>
</tr>
<tr>
<td>Not admitted</td>
<td>40.3%</td>
<td>49.9%</td>
<td>55.9%</td>
<td>61.3%</td>
</tr>
</tbody>
</table>

Note: On average, each day would be expected to account for 14.3% of presentations.

Table 4: Recommended next care in 2012 by HSE hospitals group.
Following successive increases in deliberate self-harm in Ireland during the period 2007-2010, the 2012 Annual Report of the National Registry of Deliberate Self Harm shows a second subsequent annual decrease. Considering the relatively small reduction, this should be interpreted with caution since it would be premature to conclude that this indicates a decreasing trend. The 2012 Registry outcomes underline an on-going need for prevention and intervention programmes to be implemented at national level. Increased and continued support should be provided for evidence-based and best practice prevention and mental health promotion programmes in line with priorities in Reach Out, National Strategy for Action on Suicide Prevention (2005-2014) and Vision for Change, the Report of the Expert Group on Mental Health Policy.

Considering that the rate of self-harm in 2012 was still 12% higher than in 2007, before the economic recession, this underlines the need for continued implementation and evaluation of programmes to increase awareness of mental health issues among the general public and professionals involved in supporting people who are unemployed and those experiencing financial difficulties.

There is growing evidence for the effectiveness of multi-level community based self-harm and suicide prevention programmes in addressing self-harm risk among people who face socio-economic challenges and who are vulnerable in terms of varying mental health issues (Hegerl et al, 2013; Mann et al, 2005). With regard to further research into the interaction between mental health difficulties and work related risk factors associated with self-harm and suicide, the Health Research Board has provided funding to the NSRF for a three-year study, which will be conducted in collaboration with the UCC Department of Epidemiology and Public Health, and the Department of General Practice.

The Registry consistently provides evidence for different types of self-harm patients presenting to Emergency Departments (EDs), such as those engaging in highly lethal acts of self-harm with high risk of subsequent suicide and those using methods with low lethality but who may be at risk of non-fatal repetition. While it is strongly recommended that all self-harm patients presenting to the ED should receive a comprehensive risk and psychosocial-psychiatric assessment, recommended treatment should be tailored according to the patient’s needs and risk of subsequent suicidal behaviour (MacHale et al, 2013; NICE, 2011). We would recommend this as an on-going priority of the National Mental Health Programme.

In 2012, an increase of 6% was observed in attempted hanging from 2011, and by 26% since 2010, in particular among men. In terms of next care, 8.3% of those who had engaged in attempted hanging left the hospital before receiving a recommendation. Considering the high risk of subsequent suicide among people using highly lethal methods of self-harm, suicide risk assessment combined with psychiatric and psychosocial assessment should therefore be incorporated in the standard care for self-harm patients presenting to hospital EDs. In line with previous research (Baker et al, 2012; Gunnell et al, 2005), more innovative and intensified efforts should be made to reduce self-harm and suicide by hanging.

In line with previous years, misuse or abuse of alcohol is one of the factors associated with the higher rate of self-harm presentations on Sundays, Mondays and public holidays, around the hours of midnight. These findings underline the need for continued efforts to:

- Enhance health service capacity at specific times and to increase awareness of the negative effects of alcohol misuse and abuse such as increased depressive feelings and reduced self-control (NICE, 2011).
- Intensify national strategies to increase awareness of the risks involved in the use and misuse of alcohol, starting at pre-adolescent age and intensify national strategies to reduce access to alcohol and drugs (CDC, 2010).
- Educate self-harm patients and their families about the importance of reduced use of and access to alcohol (CDC, 2010).
- Arrange active consultation and collaboration between the mental health services and addiction treatment services in the best interest of patients who present with dual diagnosis (psychiatric disorder and alcohol/drug abuse) (NICE, 2011).

As in previous years, minor tranquillisers (benzodiazepines) were by far the most common type of medication involved in intentional acts of drug overdose, accounting for 3,353 presentations to hospital in 2012. The second and third most frequently used drugs in intentional drug overdoses were paracetamol containing medication and Selective Serotonin Reuptake Inhibitors (SSRIs)/mood stabilisers respectively. In January 2012,
the National Office for Suicide Prevention (NOSP) established a National Working Group on Restricting Access to Means with a priority on restricting access to minor tranquillisers. We would recommend that this working group continues to address access to minor tranquillisers and would review the implementation of the paracetamol legislation and prescribing patterns of SSRIs as additional priorities.

Based on a subsample of the Registry, we found that having a prescription of a minor tranquilliser increased the risk of using psychotropic drugs in intentional overdoses, and this risk increased with age (Corcoran et al, 2013). Therefore, we would recommend:

- Careful monitoring of the use of medication by the prescribing health professionals, in particular among older people.
- Consideration of referral to complementary or alternative therapies for patients with anxiety disorders, such as cognitive-behavioural therapy.

Compared to 2011, a significant reduction was observed in the involvement of street drugs in intentional drug overdose acts which fell by 10% in 2012, which follows a 27% reduction in 2011. This reduction is likely to be associated with the ban on head shop drugs from August 2010 onwards. This finding would be in line with nationally and internationally consistent effects of strategies aimed at restricting access to means on reducing self-harm and suicide (Arensman, 2010; Corcoran et al, 2010; O’Driscoll et al, 2009; Mann et al, 2005).

While 2012 saw a decrease in deliberate self-harm involving self-cutting (-8%), the current report shows ongoing evidence that self-cutting is the method most strongly associated with high-risk of repeated self-harm following a presentation to an ED (Arensman et al, 2013; Larkin et al, 2013).

The Registry further illustrates the ‘dose-response relationship’ between the number of self-harm presentations and risk of repetition (Perry et al, 2012). There is need for continued efforts to prioritise national implementation of evidence-based treatments shown to reduce risk of repetition, such as cognitive behavioural and dialectical behavioural interventions (Daigle et al, 2011; Binks et al, 2006). The NOSP has funded the national implementation of dialectical behaviour therapy for people diagnosed with Borderline Personality Disorder. The NOSP has also funded a pilot project in Cork and Kerry with the aim to implement and evaluate a brief CBT programme for self-harm patients presenting to EDs using a Train-The-Trainer model with potential for national implementation.

In line with previous years, there was considerable variation in the next care recommended to deliberate self-harm patients, and the proportion of patients who left hospital before a recommendation, from 6% in the South Eastern Hospitals Group to 19% in the Dublin North East Hospitals Group. A subgroup of the National Mental Health Clinical Programme Steering Group produced National Guidelines for the Assessment and Management of Patients presenting to Irish Emergency Departments following self-harm (MacHale et al, 2013). It is recommended that these guidelines be implemented nationally as a matter of priority. In addition, the NOSP has funded a pilot project to implement and evaluate suicide and self-harm awareness training for all ED staff and improving assessment procedures for self-harm patients in Cork and Kerry, which is a collaborative initiative between Cork University Hospital and the NSRF.

On-going work is being undertaken by the NSRF to link the Registry data with suicide mortality data obtained through the Suicide Support and Information System in Cork and the Central Statistics Office data. Linking the Registry self-harm data with the SSIS suicide mortality data revealed that self-harm patients were over 42 times more likely to die by suicide than persons in the general population – O’Farrell et al (under review). Evidence of the association between self-harm and suicide is further supported by recent UK based research showing a significant association between self-harm involving self-cutting and suicide among both adults and young people (Bergen et al, 2012; Hawton et al, 2012). In addition, there are indications that increasing rates of self-harm in men are likely to be followed or paralleled by increasing suicide rates among men. It is therefore recommended that deliberate self-harm data be linked with suicide mortality data at a national level in order to enhance insight into predictors of suicide risk.

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Information from the Registry on self-harm trends, demographic and clinical characteristics, has guided the development and implementation of recommendations and specific interventions, such as:

1. The implementation of self-harm specialist nurses in hospital emergency departments in Ireland as part of the National Mental Health Programme (2013-2014) - The implementation will take place in 2013 and 2014 according to a stepped approach and prioritising hospitals according to the number of self-harm presentations.

2. The implementation of Dialectical Behaviour Therapy (DBT) at national level (2013-2015) - Following successful implementation of DBT for patients with Borderline Personality Disorder and frequent self-harm repetition in Cork, DBT will be implemented nationally according to a stepped approach and prioritising areas with high levels of repeated self-harm.


4. NOSP working group on restricting access to benzodiazepines (2012-2014) – The Registry consistently shows that intentional drug overdose involving benzodiazepines is high in Ireland. This information contributed to establishing a working group on restricting access to benzodiazepines by the NOSP.

5. Limerick working group on reducing suicide and self-harm by drowning (2012-2014) – In recent years, the Registry identified a significant increase in attempted suicidal drownings in Limerick, which was paralleled by an increase in fatal suicidal drownings. This information contributed to establishing a working group in reducing suicide and self-harm by drowning by the local Suicide Resource Officer and other stakeholders.

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