What happens to deliberate self harm (“attempted suicide”) patients in the long term

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Background
There is a very strong relationship between deliberate self harm (DSH) and suicide in that between 40% and 60% of people who die by suicide have a history of at least one episode of DSH, and DSH is the strongest risk factor for suicide. Up-to-date information on risk of suicide following DSH is required in order to both target and evaluate suicide prevention initiatives. We also require information on this risk in specific subgroups. In recent years in the United Kingdom and elsewhere there have been increases in the extent of DSH. Also, the age, gender and characteristics of both DSH patients and people dying by suicide have changed, with increasing rates in young males. Suicidal intent is often evaluated in patients following DSH. The association between level of suicidal intent and subsequent suicide is unclear. Previous studies have shown that DSH patients have elevated risks of dying from causes other than suicide. However, large samples of patients and a long follow-up period are needed to investigate associations for all causes of death.

The aim of the present study was to conduct a long-term follow-up study of a large consecutive cohort of DSH patients in order to assess the risk of suicide according to length of follow-up, gender, age, repetition status, and suicidal intent. It was also designed to assess the risk of death from causes other than suicide.

Method
The cohort of DSH patients was identified through the Oxford Monitoring System, by means of which data is collected on all DSH patients presenting to the general hospital in Oxford. The main cohort of patients was identified during the 20-year period between January 1st 1978 and December 31st 1997. Follow up was until the end of 2000, a mean follow-up period of 11.3 years (minimum 3 years, maximum 23 years). For the part of the study concerned with suicidal intent (assessed with the Beck Suicide Intent Scale) patients who presented during the 5-year period between 1st January 1993 and 31st December 1997 were included.

The patients were aged 15 years and over. Information on death or survival was collected through national mortality registers for England and Wales, Scotland and Northern Ireland. Expected numbers of deaths were calculated from national mortality statistics. The original sample included 12,666 patients. Follow up was possible for 11,583. Approximately two-thirds (N = 6961) were female and two-
thirds were aged under 35 years of age. The method of DSH was self-poisoning in 85% of cases.

Results
By the end of 2000, 1185 (10.2%) of the patients had died. The death rate was more than double the expected rates, the excess being significantly greater in males than females. Suicide or probable suicide (undetermined cause and accidental poisoning) had occurred in 300 (2.6%) cases. The risk in the first year following DSH was 0.7% (66 x the general population risk). The risk was higher in males (1.1%) than females (0.5%), although the excess risk compared with suicide risk in the general population was greater in females (90 times) than males (64 times). By the end of 15 years of follow up suicide had occurred in 4.8% of males and 1.8% of females. Risk of suicide continued throughout 15 years of follow up.

Risk of suicide increased with age at the time of DSH in both genders, with a particular escalation in risk in females aged 55 years and over compared with other females. In males aged 55 years and over 10.2% died by suicide; in females in this age range 5.2% died by suicide. Suicide risk persisted over time in all age groups in both genders.

The risk of suicide was significantly greater in the first year following DSH in those patients who were repeaters of DSH at their first presentation in the study period (1.1%) compared with those for whom this presentation was their first ever episode of DSH (0.6%). This excess risk in repeaters continued during the follow-up period. Their risk appeared to remain fairly constant over time, whereas that of first-timers appeared to level off. Females who were multiple repeaters had a far greater risk of suicide than those with just one repeat.

Suicide risk was elevated in patients with high suicide intent scale (SIS) scores compared with those with low scores in both genders, but especially in females. Of patients who died by suicide and had SIS scores, those with high scores were more likely to die in the first year after DSH, whereas those with low scores were more likely to die later. Scores on the circumstances section of the SIS were a better predictor of suicide risk than scores on the self-report section. Use of receiver operating characteristics (ROC) curves to assess prediction of risk in individual patients, however, showed that SIS scores, even at optimal cut-off points in each gender, were a poor predictor of risk, with an unacceptably high false-positive rate.

Overall risk of death compared with general population risk was very high for suicide (16.8 times), open verdicts (15.1 times) and accidental poisoning (14.8 times). Non-poisoning accidents (e.g. RTAs) were 3 times more frequent than expected and homicides occurred 4.1 times more than expected (although this was based on small numbers and only found for males). Natural causes of death which were more frequent than expected in the DSH patients included those due
to circulatory, respiratory, gastro-intestinal, neurological and endocrine disorders. The deaths due to gastro-intestinal disorders included many related to alcohol abuse. Those due to endocrine disorders were mainly related to diabetes.

Conclusions
DSH patients have a greatly elevated risk of dying from suicide, especially during the first year following DSH. In the present study suicide occurred in 0.7% in the first year, a risk 66 times that of the suicide rate in the general population. The risk of suicide was particularly elevated in males, older age groups, and repeaters of DSH (especially females who were multiple repeaters). There was an excess risk of suicide even many years after DSH. High suicide intent was associated with greater risk of suicide, especially in the first year following DSH. In clinical practice the circumstances part of the Suicide Intent Scale probably suffices (plus a question about whether the patient intended to die). However, suicidal intent is not a reliable predictor of suicide in the individual patient. It must be considered within overall assessment of risk based on all available information. DSH is also associated with increased risk of death from accidents, homicides and several physical disorders. All potential outcomes need to be considered, both in relation to prevention and to evaluation of the overall healthcare burden of deliberate self harm.

References


Hawton, K., Harriss, L., Zahl, D. Deaths from all causes in a long-term follow-up study of 11,583 deliberate self harm patients (submitted for publication).