Changing patterns of self-poisoning in a UK health district

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Summary

Details of admissions to a dedicated district poisons treatment unit in South Glamorgan were analysed to assess changes in self-poisoning patterns between 1987-1988 and 1992-1993. Self-poisoning rates increased in both men and women, with male rates showing a relatively larger increase, resulting in a fall in female to male ratio for person-based rates from 1.33:1 to 1.13:1. The highest age-specific rates in both period were found in 15-19-year-old females. Paracetamol was the most commonly ingested poison in 1992-1993, with 43.4% of episodes involving its use, compared with 31.3% of episodes in 1987-88. Antidepressant involvement in self-poisoning also increased from 11.3% of episodes in 1987-1988 to 17.6% of episodes in 1992-1993. Repetition of self-poisoning was relatively common, with 18% of admissions per year in 1992-1993 representing repeats. Although hospital admission increased in this health district over the study periods, this was not reflected in an increase in in-patient all-cause mortality, which was only 0.5% in 1987-1988 and 0.1% in 1992-1993.

Introduction

Self-poisoning accounts for over 100 000 acute hospital admissions per year in the UK (106 840 for the period between 1 April 1993 and 31 March 1994). In-patient mortality is low, but the increased risk of subsequent suicide, together with morbidity and financial considerations, highlights the importance of addressing the problems posed by this particular group of patients.

To assess how patterns of self-poisoning are changing with time, and thus to identify areas open to further study, we compared data on all admissions to our district poisons treatment unit between 1 January 1987 and 31 December 1988, with those between the corresponding dates in 1992 and 1993.

Methods

The Cardiff Poisons Treatment Unit is an 8-bed unit dedicated to the management of patients aged 15 and over following accidental and deliberate self-poisoning. Patients below the age of 15 are on occasion admitted to the unit and they are included in the overall data, but excluded for the purposes of calculation of rates of poisoning. The unit serves the South Glamorgan District, whose population is approximately 410 000. The population figures used to generate rates for 1987-1988 and 1992-93 were means of mid-year estimates supplied by the Office of Population Censuses and Surveys. The few patients not resident in South Glamorgan were only excluded from rate calculations.

Data from the central bed bureau (responsible for arranging the admissions of all patients referred via general practitioners) and the local Accident and Emergency Department (situated across the city) indicate that in excess of 90% of all cases of self-poisoning requiring hospital admission were managed on the poisons unit in both two-year periods. Details of all patients admitted to the unit were recorded by the admitting Medical Officer on a standard proforma which serves as a medical case record sheet. A full psychiatric assessment was routinely available to all patients, usually on the day...
following admission and was, in the main, at registrar level and above. Twenty-four-hour emergency psychiatric cover was also available. Data extracted from the proformas were entered into a computer database for subsequent analysis.

Self-poisoning was defined as the deliberate or accidental ingestion of a drug or drugs in doses above those prescribed for the patient or in excess of recognized therapeutic norms. Recreational drugs, gases, chemicals and non-ingested substances were also included. Alcohol was included as a secondary poison when taken in combination with other drugs and as a primary poison, if taken with the purpose of deliberate self harm. Inebriated patients were also included if, in the opinion of the referring doctor, they required hospital admission. For the majority of patients, details of poisons implicated were obtained from the clinical history or from circumstantial evidence (such as empty tablet containers). Laboratory toxicological confirmation was obtained where clinically indicated.

Modifications to the database provided accurate figures for daily self-poisoning incidence for 1992–93. For both years the frequency distribution for daily self-poisoning was highly skewed. Although the distribution for the two years combined approached normality, it was considered more accurate to apply the non-parametric Kruskal-Wallis one-way analysis of variance to test for variations in mean daily admission rates by day of the week, month and season. This was not possible for 1987-88.

Details of 1764 admissions for 1987-88 and 2368 admissions for 1992-93 were obtained. Where data were incomplete, the denominator is indicated. Where number of patients rather than admissions are specified, correction was made for multiple admissions. For the purposes of this study, repeat admissions were those in excess of one index admission per calendar year. Statistical comparisons between the two study periods are expressed as 95% confidence intervals of the differences between proportions.

**Results**

**Incidence, age and gender**

Details of self-poisoning admissions (episodes) and the patients responsible for these admissions (persons) for 1987–88 and 1992–93 are shown in Table 1. The crude person-based female to male ratio for 1987–88 was 1.52:1, by 1992–93 this had fallen to 1.24:1.

Mean annual person-based self-poisoning rates increased from 230/100 000 population in 1987–88 to 288/100 000 in 1992–93. Episode-based rates showed a similar rise from 268/100 000 to 356/100 000.


The age-specific self poisoning rates by gender for both periods under study are shown in Figure 1. Marked peaks in female rates were seen in the 15–19 age group in both periods (613/100 000 in 1987–88 rising to 846/100 000 in 1992–93), with the next highest rates in 20–24-year-olds (450/100 000 in 1987–1988 and 481/100 000 in 1992–1993).

In males, variation is less dramatic. In 1987–1988 rates were highest in 15–19 and 30–34-year-olds (312/100 000 and 311/100 000, respectively). By 1992–1993, 20–24-year-olds were the predominant age group (476/100 000) with the under-forties responsible for most of the increase seen in male self-poisoning rates.

**Sources of admission**

In 1987–88, 71% of admissions were via the Accident and Emergency Department, 21% via general practitioner referrals and 8% by other methods, including self-referral (2.6%).

In 1992–93, the majority of admissions (74%) remained Accident and Emergency referrals, with general practice providing 18% of admissions. Again, 8% used alternative modes of admission, including self-referral (2.4%).

**Temporal distribution of patients**

In both 1987–1988 and 1992–1993 the highest number of admissions (episodes) to the unit occurred...
Self-poisoning in the UK

Figure 1. Mean annual age and person-specific self-poisoning rates by gender in South Glamorgan 1987–88 and 1992–93.

on Thursdays and fewest on Wednesdays, but no significant variation in mean daily frequency of episodes by day was seen for 1992–1993.

There was a statistically significant variation in mean daily episode frequency by month in 1992–1993 (p < 0.01 by Kruskal-Wallis) with fewest admissions in December and most in October (Table 2). December and September were the months with fewest admissions in 1987–1988, and March was the month with the most.

**Poisons implicated**

The poisons implicated in self-poisoning episodes during the study are shown in Table 3. Analgesics were the most frequently ingested agents in both study periods, with paracetamol the most commonly taken poison in 1992–93. The number of cases involving benzodiazepines fell slightly from 1987–88 to 1992–93, while antidepressant self-poisoning increased over the same period.

Alcohol was involved either alone or in combination in 42% of cases in 1987–88 and 35% of cases in 1992–93. The ingestion of more than one poison was responsible for over half the admissions in both the study periods.

**Repeaters**

In 1987–88, on average 8.4% of patients were responsible for 20.8% of admissions per year, with 13.6% of admissions per year representing repeats. The mean event to person ratio was 1.16:1 (1.16:1 for both males and females).

In 1992–93, 11.7% of patients were responsible for 28.3% of admissions per year, with 18.3% of admissions per year representing repeats. The mean
Table 3  Poisons implicated in self-poisoning episodes

<table>
<thead>
<tr>
<th>Poison</th>
<th>1987–88 n = 1561</th>
<th>1992–93 n = 2307</th>
<th>Percentage change (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analgesics*</td>
<td>790(50.6)</td>
<td>1227(53.2)</td>
<td>+2.6 (-0.6, +5.8)</td>
</tr>
<tr>
<td>Paracetamol</td>
<td>488(31.3)</td>
<td>1001(43.4)</td>
<td>+12.1 (9.0–15.2)</td>
</tr>
<tr>
<td>Aspirin</td>
<td>160(10.2)</td>
<td>168(7.3)</td>
<td>-2.9 (-4.7, -1.1)</td>
</tr>
<tr>
<td>Other analgesics</td>
<td>142(9.1)</td>
<td>582(25.3)</td>
<td>-6.6 (-8.2, -5.0)</td>
</tr>
<tr>
<td>Hypnotics &amp; Anxiolytics</td>
<td>583(37.3)</td>
<td>756(32.8)</td>
<td>-4.5 (-7.6, -1.4)</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>542(34.7)</td>
<td>692(30.0)</td>
<td>-4.7 (-7.7, -1.7)</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>176(11.3)</td>
<td>406(17.6)</td>
<td>+6.3 (4.1–8.5)</td>
</tr>
<tr>
<td>Alcohol as primary poison</td>
<td>73(4.7)</td>
<td>124(5.4)</td>
<td>+0.7 (-0.7, +2.1)</td>
</tr>
<tr>
<td>Other drugs</td>
<td>579(37.1)</td>
<td>960(41.6)</td>
<td>+4.5 (1.4–7.6)</td>
</tr>
<tr>
<td>Alcohol as secondary poison</td>
<td>589(37.7)</td>
<td>699(30.3)</td>
<td>-7.4 (-10.4, -4.4)</td>
</tr>
<tr>
<td>More than one substance</td>
<td>880(56.4)</td>
<td>1201(52.1)</td>
<td>-4.3 (-7.5, -1.1)</td>
</tr>
</tbody>
</table>

*Excluding NSAIDs.

The event to person ratio was 1.24:1 (1.3:1 for males and 1.18:1 for females).

The highest number of multiple admissions involving a single patient was 17 in 1987–88 and 15 in 1992–93.

Psychiatric diagnoses

Accurate records were available for 1538 admissions in 1987–88, of which 71% were assessed by a psychiatrist and 60% given a diagnostic code. Of 2266 admissions in 1992–93 for which accurate records existed, 62% were psychiatically reviewed and 56% diagnostically coded. Table 4 summarizes diagnoses reached, together with their respective ICD-9 diagnostic codes.

Some 55% of admissions in 1987–88 and 66% in 1992–93 were thought to have a psychiatric abnormality. Neurotic disorder was the most common diagnosis reached in 1992–93, compared with personality disorder in 1987–88. These two conditions, together with alcohol dependence syndrome and affective psychosis, accounted for over 80% of all diagnoses in both study periods.

Suicidal intent

Classification of episode by suicidal intent for both study periods is shown in Table 5. The majority of cases in both periods were considered to represent deliberate self-poisoning without true suicidal intent, but an increased percentage of deliberate suicidal attempts was seen in 1992–93 compared with 1987–88.

Outcomes

The mean duration of stay on the unit was 34 h for 1988 (figures for 1987 are not available) and 31 h for 1992–93. Disposal of patients is summarized in

Table 4  Psychiatric diagnoses in self-poisoning admissions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>1987–88 n = 910</th>
<th>1992–93 n = 1278</th>
<th>Percentage change (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No psychiatric disorder</td>
<td>407(44.7)</td>
<td>431(33.7)</td>
<td>-11 (-15.1, -6.9)</td>
</tr>
<tr>
<td>301 Personality disorder</td>
<td>161(17.7)</td>
<td>161(12.6)</td>
<td>-5.1 (-8.2, -2.0)</td>
</tr>
<tr>
<td>300 Neurotic disorder</td>
<td>139(15.3)</td>
<td>289(22.6)</td>
<td>+7.3 (4.0–10.6)</td>
</tr>
<tr>
<td>303 Alcohol dependence syndrome</td>
<td>103(11.3)</td>
<td>207(16.2)</td>
<td>+4.9 (2.0–7.8)</td>
</tr>
<tr>
<td>296 Affective psychosis</td>
<td>74(8.1)</td>
<td>180(14.1)</td>
<td>+6.0 (3.4–8.6)</td>
</tr>
<tr>
<td>304 Drug dependence</td>
<td>40(4.4)</td>
<td>43(3.6)</td>
<td>+0.6 (-2.5, +0.9)</td>
</tr>
<tr>
<td>295 Schizophrenic psychosis</td>
<td>34(3.7)</td>
<td>48(3.8)</td>
<td>+0.1 (1.5–1.7)</td>
</tr>
<tr>
<td>309 Adjustment reaction</td>
<td>28(3.1)</td>
<td>0(0)</td>
<td>-3.1 (-4.2, -2.0)</td>
</tr>
<tr>
<td>297 Paranoid state</td>
<td>4(0.4)</td>
<td>8(0.6)</td>
<td>+0.2 (0.4–+0.8)</td>
</tr>
<tr>
<td>Others</td>
<td>10(1.1)</td>
<td>55(4.3)</td>
<td>+3.2 (1.9–4.5)</td>
</tr>
<tr>
<td>More than one diagnosis</td>
<td>97(10.7)</td>
<td>130(10.2)</td>
<td>-0.5 (-2.3, +1.3)</td>
</tr>
</tbody>
</table>
Table 5 Classification of suicidal intent of self-poisoning admissions

<table>
<thead>
<tr>
<th>Mode of Action</th>
<th>1987–88 n = 910</th>
<th>1992–93 n = 1278</th>
<th>Percentage change + 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliberate suicidal</td>
<td>173 (16.0)</td>
<td>299 (22.7)</td>
<td>+6.7 (3.6–9.8)</td>
</tr>
<tr>
<td>Deliberate non-suicidal</td>
<td>797 (73.8)</td>
<td>894 (67.8)</td>
<td>−6.0 (−9.6, −2.4)</td>
</tr>
<tr>
<td>Accidental</td>
<td>81 (7.5)</td>
<td>125 (9.5)</td>
<td>+2.0 (−0.2, −4.2)</td>
</tr>
<tr>
<td>Other</td>
<td>28 (2.6)</td>
<td>0 (0.0)</td>
<td>−2.6 (−3.5, −1.7)</td>
</tr>
</tbody>
</table>

Table 6 Disposal of self-poisoning admissions

<table>
<thead>
<tr>
<th>Mode of Action</th>
<th>1987–88 n = 910</th>
<th>1992–93 n = 1278</th>
<th>Percentage change + 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-discharge</td>
<td>181 (11.7)</td>
<td>194 (8.3)</td>
<td>−3.4 (−5.4, −1.4)</td>
</tr>
<tr>
<td>Home, no follow-up</td>
<td>653 (42.3)</td>
<td>964 (41.3)</td>
<td>−1.0 (−4.2, + 2.2)</td>
</tr>
<tr>
<td>Home, psychiatric o/p</td>
<td>419 (27.1)</td>
<td>571 (24.5)</td>
<td>−2.6 (−5.4, + 0.2)</td>
</tr>
<tr>
<td>Home, psychiatric s/w</td>
<td>105 (6.8)</td>
<td>137 (5.9)</td>
<td>−0.9 (−2.5, + 0.7)</td>
</tr>
<tr>
<td>Psychiatric in-patient</td>
<td>106 (6.8)</td>
<td>274 (11.7)</td>
<td>+4.9 (3.1–6.7)</td>
</tr>
<tr>
<td>Other</td>
<td>70 (4.5)</td>
<td>193 (8.3)</td>
<td>+3.8 (2.3–5.3)</td>
</tr>
</tbody>
</table>

Table 6. The majority of patients in both periods were discharged to be followed up by either their general practitioner or the psychiatric out-patient services. An increase was seen in the percentage of patients transferred to in-patient psychiatric facilities from 6.8% in 1987–88 to 11.7% in 1992–93.

In 1987–88, two patients required ventilation on the intensive care unit compared with eight in 1992–93. Two patients in 1992–93 were transferred to the Liver Transplant Unit at Kings College Hospital. Eight deaths were recorded on the poisons unit in 1987–88 representing an in-patient mortality rate of 0.5% of admissions. There were two deaths in 1992–93 (0.1% of admissions). Details of the self-poisoning deaths are shown in Table 7. Paracetamol was responsible for three of the fatal outcomes in 1987–88, and also led to the admission of one patient who absconded from the unit and hanged himself in the hospital grounds. One death in 1992–93 also involved paracetamol.

Table 7 Factors involved in fatalities

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Cause of death</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>44</td>
<td>Intracerebral haemorrhage (alcohol, diazepam)</td>
</tr>
<tr>
<td>M</td>
<td>22</td>
<td>Asphyxia secondary to hanging (paracetamol)</td>
</tr>
<tr>
<td>F</td>
<td>75</td>
<td>Paracetamol</td>
</tr>
<tr>
<td>M</td>
<td>35</td>
<td>Paracetamol</td>
</tr>
<tr>
<td>M</td>
<td>34</td>
<td>2,4 Dichlorophenoxyacetic acid</td>
</tr>
<tr>
<td>M</td>
<td>51</td>
<td>Chloromethiazole</td>
</tr>
<tr>
<td>M</td>
<td>36</td>
<td>Paracetamol</td>
</tr>
<tr>
<td>M</td>
<td>41</td>
<td>Amitriptyline, carbon monoxide</td>
</tr>
<tr>
<td>1992–93</td>
<td>42</td>
<td>Clozapine</td>
</tr>
<tr>
<td>1987–88</td>
<td>80</td>
<td>Alcohol, paracetamol, lorazepam, oxazepam</td>
</tr>
</tbody>
</table>

Discussion

After a fall in UK attempted suicide rates in the late 1970s and early 1980s, there is evidence for an increase in the mid-to-late 1980s. Given that self-poisoning is responsible for the vast majority of such cases, our study lends support to the impression that this trend has continued in the early 1990s, particularly with respect to men. The decline in the female-to-male ratio for person-based self-poisoning rates between 1987–88 and 1992–93 seen in this study mirrors national and international parasuicide findings. Whether this is a function of changes in social roles between the sexes remains an issue for further study.

Young people in general, and 15–19-year-old females in particular, remain the most frequent self-poisoning group in South Glamorgan. Hawton et al.
have highlighted the disparity between UK and European attempted suicide rates. In Europe a slightly older age group predominates and further comparative studies are needed to explore these differences.

Although demographic differences exist between those patients who attempt and those who successfully complete suicide, there is evidence that the two groups share ecological and psychological links. The increased risk of completed suicide after previous suicide attempts has already been noted and the recent increase in suicide rates in young men taken in conjunction with increased rates of male self-poisoning and parasuicide in general, all suggest that measures taken to reduce the incidence of suicide attempts may be of value in helping to meet Health of the Nation targets on suicide reduction.

There is, of course, a need for caution when attempting to extrapolate the conclusions of an in-patient-based self-poisoning study to the self-poisoning population as a whole, since it has been estimated that the true national incidence may be as much as three times the hospital admission rate. There is evidence both for and against similarities between those admitted to hospital and those not admitted following self-poisoning. Since it is unlikely that accurate information pertaining to the self-poisoning population as a whole will ever be available, we must limit ourselves to attempts to highlight areas open to intervention in the hospital-based group, which may also help to reduce suicide attempts in the community as a whole, particularly as most self-poisoning deaths occur outside hospital.

One obvious target is the poison itself. We have highlighted the increase in paracetamol self-poisoning, such that it is now the most common drug taken in overdose in South Glamorgan. This is similar to the findings in Oxford and of a recent report from Scotland. Increases have also been reported in Australia and New Zealand. Self-poisoning with paracetamol was responsible for at least 270 deaths in 1992–93 in the UK with many more fatalities recorded in which paracetamol was ingested in combination with other drugs. In-patient mortality remains low, due in part to optimization of treatment strategies, with greater awareness of situations where risk of liver damage is increased. Further research is required to supplement recent work on why patients choose paracetamol as a self poison and to identify the best way of reducing the mortality and morbidity associated with this drug in overdose.

It is recognized that patients preferentially overdose on drugs which have been prescribed for them and in view of the close links between depression and suicide, antidepressants are always likely to be responsible for a good proportion of self-poisoning episodes. We have demonstrated an increase in the percentage of such episodes due to antidepressants between 1987–88 and 1992–93. Similar reports come from Oxford and New Zealand. We have also noted a strikingly similar increase in the percentage of patients diagnosed as suffering from affective psychosis between the two study periods. Although appearing outwardly predictable, the exact relationship between these observations cannot be quantified without individual case-by-case analysis of, for example, factors such as which patients were already on treatment prior to their suicide attempt. This is beyond the scope of the present study. Whereas in the 1987–88 group tricyclic antidepressants were responsible for the vast majority of antidepressant-related self-poisoning episodes, one quarter of all such episodes in 1992–93 were due to selective serotonin re-uptake inhibitors (SSRIs). Analysis of trends in South Glamorgan through the 1990s (unpublished data) reveals an increase in SSRI self-poisoning at the expense of the tricyclic antidepressants predominantly in men, almost certainly as a result of defensive prescribing. Public awareness of the SSRI group of drugs is quite high as a result of media coverage and if self-poisoning with them continues to increase, it will be interesting to explore the reasons given by patients for choosing to take these agents in overdose.

The fall in benzodiazepine self-poisoning in this study is similar to UK and international findings in the 1980s and early 1990s. Benzodiazepines were, however, responsible for 3 out of every 10 episodes of self poisoning admitted to our unit in 1992–93 and they remain a major cause of self-poisoning-related morbidity worldwide. The frequent involvement of benzodiazepines in episodes of completed suicide emphasizes the need for rational prescribing, although as alluded to by Buckley et al., over-stringent limitations may lead to problems, as there is little doubt that the benzodiazepines are a much safer drug in overdose than the barbiturates whose place they have taken.

Alcohol remains a problem, with 35% of self-poisoning episodes in 1992–93 involving this agent. In Oxford between 1989 and 1992, alcohol was taken as part of the suicide attempt in 25% of episodes, and in 44.5% had been consumed in the 6 h prior to the attempt. In one study of admissions to a Finnish hospital in 1983, as many as 62% of parasuicide patients had consumed alcohol in addition to other drugs. Our figures probably underestimate the role of alcohol quite considerably. Although numbers are not available for 1987–88 or 1992–93, in 1995, 39% of self-poisoning cases presenting to the local A&E department were discharged home without referral for admission. Almost all were
alcohol-related (R Evans, personal communication). Alcohol-related episodes are often dismissed as trivial, which is dangerous considering the part played by alcohol and alcoholism in the pathogenesis of attempted suicide, parasuicide repetition and completed suicide.

Over 50% of self-poisoning episodes in both the periods under study involved ingestion of more than one agent: 30–50% of self-poisoning episodes in Western Europe and North America involve two or more poisons. Prescribing patterns, particularly in at-risk groups, need critical appraisal, as confirmed by a recent study showing that 44% of suicide attempts had taken newly prescribed medication in their attempt.

Patients who repeatedly attempt suicide are a difficult group to manage. In Cardiff between 1950 and 1965, 11.2% of 1736 admissions with deliberate self-poisoning represented repeat admissions. Short-term repetition rates had increased slightly by 1987–88, but the marked further increase seen in the 1992–93 group suggests numerous additions to the local pool of repeaters well in excess of losses due either to behavioural changes or deaths within the group. It also confirms the inadequacy of current strategies for dealing with this problem. The situation is similar throughout Europe. Our overall events to person ratio for 1992–93 is higher for both males and females aged 15 and over than the average Oxford ratio for 1989–92 (1.18 males, 1.16 females) and the European median ratio for 1989 (1.12 males, 1.13 females). Formulation of prevention and treatment plans is handicapped by the failure of the well-recognized risk factors for parasuicide repetition to identify prospective repeaters with any degree of certainty. Formal psychiatric treatment also appears to be of little benefit to this group, limited success has been achieved using cognitive-based problem-solving treatment and a highly individualized strategy aimed at preventing repetition in patients following their first ever suicide attempt. The value of such work is underlined by the close links between repetition and completed suicide, even the most manipulative of repeaters exposes themselves to risk with each self-poisoning episode regardless of suicidal intent. This is amply illustrated by patient 9 (see Table 8) who, following more than 90 admissions to the unit over a 7-year period, died as a result of a tragic dosage miscalculation. The WHO has identified repetition as an area of particular concern, and a concerted research effort will be needed if this problem is to be solved.

In both study periods, the proportion of patients given a psychiatric diagnostic code was quite low. This is to some extent inevitable in a system based on next-day review, and could have been overcome by immediate psychiatric assessment of all admissions which, unfortunately, was impracticable at the time. Over the course of the study, increases have been seen in the percentages of patients diagnosed as suffering from neurotic disorder, alcohol dependence syndrome and affective psychosis, whilst personality disorder was less commonly diagnosed in 1992–93 compared with 1987–88. The overall rise in incidence of diagnoses recognised to be risk factors for suicide, together with increases in the percentage of episodes where intent was considered to be deliberately suicidal and in psychiatric in-patient admission rates, suggest a trend towards greater psychiatric seriousness in our suicide attempters. Whilst it is unlikely that diagnostic differences between assessing psychiatrists or changes in prevailing diagnostic fashion have contributed markedly to these changes, without greater numbers of diagnostic codes, it is impossible to confirm this impression.

The fall in admissions during winter with fewest self-poisoning episodes presenting to the unit in December in both study periods, confirms previous findings relating to parasuicide, although analysis for 1992–93 reveals that only monthly variation in mean daily admission rates achieved levels of statistical significance. No clear pattern for peak admission rates emerged from this study.

Our low in-patient mortality rates tally with UK and international rates of less than 1%. The short mean lengths of stay and low levels of Intensive Care Unit bed use reinforce the idea that most hospital admissions due to self-poisoning are not life-threatening in nature. Nevertheless, such individuals need careful assessment because they may be at increased risk of repetition with subsequent fatal outcome.

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**References**


45. Morgan HG, Jones EM, Owens JH. Secondary prevention of
Self-poisoning in the UK


47. Barnes RA. The recurrent self-harm patient. Suicide Life-Threat Behav 1986; 16:399-408.


