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The University of Manchester

The National Confidential Inquiry into Suicide and Homicide by People with Mental Illness

Suicide and Homicide in Northern Ireland

JUNE 2011

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MINISTER'S FOREWORD

Suicide is a highly complex issue and continues to present a growing challenge for our society despite strenuous efforts across the statutory, community and voluntary sectors together with inspirational support from bereaved families. The individual circumstances for each person represented in the statistics presented in this report are unique. Nevertheless, to reduce the risk of suicide it is important, where possible, to identify common themes and patterns.

We are all aware that people are now facing increasing pressures that can threaten their mental health and wellbeing. Substance misuse is a more common feature of modern life, particularly in areas of social and economic disadvantage; secure employment opportunities are not as plentiful; personal debt is rising; the gap in educational attainment remains; and stable family life is not as dominant a feature in society as it once was.

This report demonstrates the link between mental ill health and suicide with the finding that 29% of people who died by suicide had been in contact with mental health services in the previous 12 months. However, this figure also indicates that many people who are suicidal, and therefore likely to have mental health difficulties, are not accessing statutory mental health services.

Covering a nine year period from January 2000 to December 2008 during which there were 1,865 suicides and probable suicides in Northern Ireland, the report presents detailed data that looks behind the headline statistics. By presenting a better understanding of these deaths, the report will assist in fine tuning policy and practice for the care of people within mental health services and help to prevent deaths.

The remit of the Inquiry also covers homicide by people who have been in contact with mental health services and the report notes that 15% of perpetrators of homicide were confirmed to have been in contact with mental health services in the 12 months before the offence. As with homicide in the general population, in most of these cases the perpetrators and victims were known to each other and, more importantly, none of the "stranger homicides" over the review period was committed by a mental health patient. Perceptions around the issue of serious violence by mental health patients can increase the fear and stigma that mentally ill people encounter. The evidence from this report reinforces the important point of the low risk to the general public from mental health patients which should be highlighted in initiatives to combat stigma.

The report highlights areas where practice can be improved and presents a series of recommendations covering policy and practice. Work is already progressing that will help put many of the recommendations in place. This includes: the development of updated policy on suicide prevention and the promotion of positive mental health; the development of the second action plan for implementation of the Bamford Review of Mental Health and Learning Disability; ongoing implementation of the "Card Before You Leave" protocol at Emergency Departments; and work with the Department of Justice to improve support for people with mental illness in the criminal justice system.

Overall, the report increases our understanding of the risks of suicide in people with mental illness and of how to respond more effectively to those risks. This will help in taking further action to reduce suicide by people who use mental health services in Northern Ireland.

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Psychiatrists and other mental health professionals who have completed questionnaires

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Suicide and homicide in the general population

Overall, 1,865 suicides occurred in Northern Ireland in the period 2000-2008, 207 per year, giving a general population annual suicide rate of 13.9 per 100,000 people. This rate is higher than in the United Kingdom as a whole, though lower than in Scotland. The suicide rate in Northern Ireland rose in the later part of the report period, in contrast to the rest of the United Kingdom. This period includes the first two years after the publication of the *Protect Life* Suicide Prevention Strategy, though it is too early to comment on the effectiveness of the Strategy.

We identified 142 homicide convictions during 2000-2008, 16 per year, though this is likely to be an underestimate. The equivalent annual homicide rate is 10.6 per million people, similar to the rate in England and Wales but lower than the rate in Scotland.

Recommendations

1. The suicide rate in the general population and in the main demographic sub-groups should be monitored closely as evidence of the effectiveness of the *Protect Life* Strategy.
2. The causes of the higher rate of suicide in Northern Ireland in comparison to England and Wales should be investigated.

Suicide and homicide in mental health patients

In the period 2000-2008, there were 533 suicides in current mental health patients, defined as having contact with mental health services in the previous 12 months. This was 29% of all suicides and corresponds to 59 patient deaths per year. The number of patient suicides rose during the report period, in line with the rise in general population suicides.

We identified 21 current mental health patients in people convicted of homicide during 2000-2008, corresponding to approximately 2 per year and 15% of all homicides. There were 6 homicides by people with schizophrenia of whom 3 were current patients.

Recommendation

3. The forthcoming mental health strategy for Northern Ireland should highlight the importance of risk management and include specific measures to tackle risk of suicide and serious violence.

Suicide in young people

The largest difference between suicide rates in Northern Ireland and other UK countries was in young people and they should be a priority for suicide prevention. 332 suicides occurred in people under 25 during 2000-2008, 37 per year. Young people who died by suicide were more likely than other age-groups to be living in the poorest areas and they had the lowest rate of contact with mental health services (15%). Young mental health patients who died by suicide tended to have high rates of drug misuse (65%), alcohol misuse (70%) and previous self-harm (73%).

Recommendations

4. Policy-makers and services should develop youth mental health services spanning the age range up to 25 years, with the skills and capacity to address substance misuse and self-harm.
5. Services for self-harm, substance misuse and mental illness should jointly review how they collaborate in the care of young people, particularly in deprived areas.

Alcohol and drug misuse

High rates of substance misuse and dependence run through this report and, as we rely on information known to clinicians, our figures are likely to underestimate the problem. Alcohol misuse, in particular, was a common feature of patient suicide (60%), and appears to have become more common. Alcohol dependence was the most common clinical diagnosis (52%) in patients convicted of homicide and, in homicide generally, alcohol misuse was a more common feature in Northern Ireland than in the other UK countries. Dual diagnosis (severe mental illness and alcohol or drug misuse) was found in 1 in 4 patient suicides. Clinicians regarded better services for dual diagnosis as an important step towards reducing risk.

Recommendations

6. Reducing alcohol misuse and dependence should be seen as a key step towards reducing the risk of suicide and homicide, requiring a broad public health approach including health education and alcohol pricing.
7. Mental health services should ensure that they have full availability of services for alcohol and drug misuse, including dual diagnosis services.

In-patient suicide

There were 35 in-patient suicides during 2000-2008. This is 4 per year, 7% of all patient suicides. The number and rate fell during the report period and, although hanging was the most common method, there were no deaths by hanging in the later years of the report period. Twenty-eight in-patient suicides (80%) occurred off the ward and in 13 of these (46%) the patient had left without staff agreement. Eight deaths occurred while the patient was under observation - in 7 of these, observations were intermittent. Eight deaths were related to problems of observation because of ward design.

Recommendations

8. In-patient services should adapt or strengthen protocols for preventing and responding to absconding.
9. In-patient services should abandon the use of intermittent observation.

Post-discharge care

Overall, 125 patient suicides (24% of all cases) and 9 patient homicides (43%) occurred within three months of discharge from hospital. There was clustering of post-discharge suicides in the 1-3 weeks after leaving hospital and, although numbers were small, a similar clustering of post-discharge homicides appeared to occur. 24% of post-discharge suicides took place before first follow-up. Post-discharge suicides were associated with re-admissions within three months of a previous admission.

Recommendations

10. Services should ensure that comprehensive care planning takes place prior to hospital discharge as a key component of the management of risk.
11. Patients discharged from hospital should be followed up within seven days.

Missed contact

In 129 patient suicides (27%) and 10 patient homicides (53%), the patient missed their final appointment with services. Missed contact was an increasingly frequent antecedent of patient suicides during the report period, in contrast to Scotland and England – both these countries have in recent years introduced assertive outreach services, in which there is an emphasis on maintaining contact and improving engagement with people with complex mental health problems and a history of treatment refusal. Although clinical teams in this study usually took some kind of follow-up action following missed contact, this was often simply a letter or a further appointment sent by post. More assertive attempts to re-establish contact by visiting the patient at home were unusual.

Recommendation

12. Services should introduce an assertive outreach function into community mental health services, through staff training, reduced case loads, and new team structures.

Risk recognition

In the majority of both patient suicides (90%) and patient homicides (81%), immediate risk at final contact with services had been seen as low. This is a finding that we have also reported in other parts of the UK. It is likely to be explained by one or more of the following:

- Risk factors are common and this can make it difficult to identify people at the highest immediate risk.
- Risk in patients can fluctuate rapidly.
- Staff may become desensitised to evidence of risk.

It is clear that a risk management strategy cannot have much effect in reducing suicides and homicides if it is based mainly on improved care for patients known to be at the highest levels of risk – there are too few of these, according to our sample. Risk management has to be improved for the majority of patients if the few who will otherwise die by suicide or commit a homicide are to be reached. This means comprehensive care plans addressing key clinical problems such as treatment refusal, missed contact and substance misuse.

It also means that risk assessment should not rely only on risk factor checklists. In this report, long term risk was likely to be judged as higher than immediate risk, and judgements were more often based on social risk factors and clinical history, suggesting that detailed history-taking can improve the accuracy of risk assessment.

The pessimism of staff about prevention is itself a potentially serious problem. Our figures show that it was unusual for staff to believe that the suicide or homicide could have been prevented - in only 9% of suicides and 7% of homicides (i.e. 1 case). In part this is likely to reflect a fear of being blamed when serious incidents occur in mental health care.

Recommendations

13. Mental health services should review their risk management processes to ensure that they are based on comprehensive assessment rather than risk factor checklists, and backed up by appropriate skills training and access to experienced colleagues.
14. Professional and policy leaders should ensure that, when serious incidents occur under mental health care, they strike an appropriate balance between identifying blame and recognising the complexities of clinical risk management, both in public statements and in how the incidents are investigated.

Stranger homicides

"Stranger homicides" are important in mental health because they are assumed to reinforce public prejudice against mentally ill people, the popular assumption being that the killing of a stranger is likely to be associated with mental illness. In this report almost a third of homicides involved the killing of a stranger and the frequency of these cases appeared to have increased in the decade up to 2008. However, these were not associated with mental disorder. None of the stranger homicides was committed by a mental health patient or someone who was mentally ill at the time of the offence.

Recommendation

15. Initiatives to combat the stigma of mental illness should emphasise the low risk to the general public from mentally ill patients living in the community.

Sentencing

Prison is not a suitable place for people with severe mental illness. In this report, almost all people convicted of a homicide offence were sentenced to prison. This included 3 of 6 people with schizophrenia, 20 of 21 current or recent mental health patients and 12 of 15 people who were found to have been mentally ill at the time of the offence. In Northern Ireland, as we have also reported in other parts of the United Kingdom, there is an excessive use of prison in dealing with homicides and, by implication, other offences by mentally ill people.

Recommendation

16. Courts and mental health services should review the sentencing of mentally ill people with a view to establishing alternatives to imprisonment.

2. ABOUT THIS REPORT

2.1 THE INQUIRY

The National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (referred to in this report as "the Inquiry") was established at the University of Manchester in 1996. The Inquiry extended its work to Northern Ireland in 1997.

Its main aim is to improve the prevention of suicide and homicide by people under the care of mental health services by:

- the collection of detailed clinical information on deaths by suicide in mental health patients and on homicides committed by people using mental health services
- recommending changes to clinical practice.

2.2 MENTAL HEALTH POLICY AND SUICIDE PREVENTION IN NORTHERN IRELAND

Mental health and well-being is a priority for Health and Social Care in Northern Ireland (HSCNI). In 2003, the Promoting Mental Health Strategy (Department of Health Social Services and Public Safety Northern Ireland (DHSSPSNI)) outlined the prevention of suicide as a key area for action. (1)

The Suicide Prevention Strategy for Northern Ireland – *Protect Life - A Shared Vision* (2) was launched in October 2006. It recognises the importance of properly resourced and co-ordinated mental health services and therefore links closely to the subsequent Bamford Review. The overall aim of the Suicide Prevention Strategy is to reduce the suicide rate in Northern Ireland and its key objectives are to:

- Raise awareness of mental health and well-being issues.
- Ensure early recognition of mental illness, and provide appropriate follow-up action by support services.
- Develop coordinated effective, accessible and timely response mechanisms for those seeking help.

- Provide appropriate training for people dealing with suicide and mental health issues.
- Enhance the support role currently carried out by the voluntary/community sectors, bereaved families and individuals who have made previous suicide attempts.
- Support the media in the development of a suitable response to suicide related matters.
- Provide support for research and evaluation of relevant suicide and self-harm issues.
- Restrict access, where possible, to the means of carrying out suicide.

The Strategy includes over 60 actions.

Reducing self-harm is specifically targeted. A Registry of Deliberate Self-Harm was launched in 2007 as part of an "All Island" initiative between Northern Ireland and the Republic of Ireland. The aim of the Registry is to identify the extent of self-harming behaviour presenting to Accident and Emergency/Urgent Care departments in the Western area of Northern Ireland (the areas covered by the Western Health and Social Care Trust and the Councils of Derry, Strabane, Limavady, Omagh and Fermanagh). Findings from the Registry's two year report (2007-2008) (3) showed that rates of self-harm were nearly twice those in the Republic of Ireland, with particularly high rates in the Derry City Council area.

The Bamford Review of Mental Health and Learning Disabilty (2007) (4) recommended person-centred, community based delivery of services, developed with the active involvement of service users and carers, in order to support people with a mental health problem or learning disability to lead as full a life as possible.

In 2011 a new Mental Health and Wellbeing Strategy will be published that will define the aims, objectives and priority actions for the promotion of mental wellbeing in Northern Ireland during 2011 to 2016 and will reflect the recommendations of the Bamford Review. The Strategy will focus on specific "raised risk" groups and include early years intervention to ensure a positive foundation for lifelong mental health and wellbeing.

2.3 SUICIDE

2.3.1 How we investigate suicide

Aim

To collect detailed clinical information on patients of mental health services who die by suicide. We investigate:

- the number and proportion of individuals who die by suicide who have been in contact with specialist mental health services in the previous 12 months (the focus being patients in the recent care of specialist psychiatric services)
- the number of deaths by suicide in "priority groups" (e.g. in-patients, patients recently discharged from hospital)
- suicide among important sub-groups in the population (e.g. those aged under 25)
- clinical circumstances and antecedents of suicide under mental health care
- rates of key clinical problems (e.g. treatment refusal, loss of contact with services, substance misuse)
- changes in these statistics over time

Method

We collect a national consecutive case series of patient suicides (April 1997 – present). There are three stages to data collection:

1. Information on all general population suicides (i.e. deaths by intentional self-harm and deaths of undetermined intent) by individuals aged 10 years or over is collected from the Northern Ireland Statistics and Research Agency (NISRA).

2. Details on each individual are submitted to mental health services in his/her district of residence, district of death and adjacent districts, to identify those with a history of mental health service contact in the 12 months before death. These individuals become "Inquiry cases".

3. Information on Inquiry cases is obtained from clinical teams via a questionnaire sent to the consultant psychiatrist.

Deaths of undetermined intent are conventionally regarded as probable suicides and included in studies of suicide. In the Inquiry, these deaths are included unless it is clear that suicide was not considered at inquest.

We also collect data on people who die in prison but only if they have had contact with mental health services in the year before death.

The questionnaire issued to the consultant psychiatrist consists of sections covering: identification of priority groups (e.g. in-patients, post-discharge patients); demographic details; clinical history; details of the suicide; details of in-patient/community care received; details of final contact with services; events leading to the suicide; respondents' views on prevention, and additional information. Response rates are high overall at 99% since data collection began.

2.3.2 Numbers and rates of suicide in this report

General population suicide numbers and rates in this report differ from those published on the NISRA website (5) and recently published research. (6,7) Our figures are based on the date of death occurrence while NISRA figures are based on the date the death was registered. The period of time between when a suicide occurs and when the death is registered can be many months. For example, of the 291 suicides registered in 2006, only 218 actually occurred in 2006 with the remainder occurring in earlier years. (5)

The Inquiry figures also include small numbers of Northern Ireland residents who died in England and Scotland, as well as non-residents who died in Northern Ireland. We adopt this inclusive approach as both groups may have received health care from Northern Ireland mental health services.

Rates also differ because Inquiry calculations are based upon the number of people in the general population aged 10 years and over, whilst NISRA use the total number in the general population.

2.4 HOMICIDE

2.4.1 How we investigate homicide

Aim

To collect detailed clinical information on people convicted of homicide. We investigate:

- the number and proportion of homicide perpetrators with a history of mental illness
- the number and proportion of perpetrators with symptoms of mental illness at the time of the offence
- the number and proportion of perpetrators with a history of contact with mental health services at any time and in the 12 months before the homicide
- the clinical circumstances and antecedents of homicides by those under mental health care.
- the rate of key clinical problems (e.g. treatment refusal, loss of contact with services, substance misuse)
- changes in these statistics over time

Method

We collect a national consecutive case series of general population and patient homicides occurring since April 1997. There are four stages to data collection:

1. Information on all homicides is collected from the Northern Ireland Court Service.
2. Details on each person convicted are submitted to mental health services in each individual's district of residence and adjacent districts to identify those with a history of mental health service contact. These individuals become Inquiry cases and those cases with recent service contact (within 12 months of the offence) are analysed as the main sample.
3. Information on Inquiry cases is obtained from clinical teams via a questionnaire sent to the consultant psychiatrist.

Psychiatric reports

Psychiatric reports are written pre-trial in homicide cases to determine the mental state of the perpetrator at the time of the offence. In preparing this report, we obtained one or more court reports in 79 cases, 65% of the total sample; a higher proportion of reports than obtained in our previous report (40%), *Safety First* (2001).(8) The following data are collected from the psychiatric reports provided by the Northern Ireland Court Service: 1) details of the mental health of the perpetrator, 2) drug and alcohol use at the time of the offence, 3) psychiatric recommendations for outcome and disposal.

For Inquiry cases (i.e. those with previous contact with mental health services) the questionnaire consists of sections covering demographic details; clinical history; details of the homicide; details of in-patient/community care received; details of final contact with services; events leading to the homicide; respondents' views on prevention and any additional information. The response rate for Inquiry homicide questionnaires is 98% overall since data collection began.

Definitions of mental illness

The data on mental illness come from a number of sources: hospital orders from the Northern Ireland Court Service; mental illness at the time of the offence from psychiatric reports prepared for the courts; the presence of mental illness and diagnosis from psychiatric reports and Inquiry questionnaires.

2.4.2 Numbers and rates of homicide in this report

General population homicide numbers are different from those published in Annual Statistical Reports by the Police Service of Northern Ireland (PSNI) (9) for the following reasons:

- The PSNI reports show offences "recorded" and "clearance" numbers. Recorded offences refer to the number of incidents and not individuals recorded by the police. Clearance may occur through: (i) formal sanction, such as a charge being brought, or accepted for consideration in court or (ii) non formal sanctions, including if the Public Prosecutions Service (PPS) does not proceed with the prosecution or the offender has died.

- Cases no longer considered to be homicide because they were overturned on appeal are removed from the Inquiry dataset of convicted perpetrators.

- The numbers presented by the PSNI are based on the year that the homicide was recorded by the police; Inquiry figures are based on the year the perpetrator was convicted.

- The homicide data presented in this report are based on confirmed convictions notified to the Inquiry by the Northern Ireland Court Service. The Court Service's national database of convictions was fully established in 2007. Prior to this, individual courts provided conviction data to the Inquiry, and it is therefore possible that the numbers in this report may be underestimated. For this reason, we have not provided a national rate of homicide, or trend analysis. The clinical findings presented are from cases that have been confirmed.

2.5 ABOUT THE FINDINGS

2.5.1 Questionnaire response rates

Data completeness for patient suicide and homicide was high overall (99% for suicide and 98% for homicide) in the report period. However, in the final year reported, dataset completeness was 92% for suicide. This reflects the time required to process the data. In the final year of the longitudinal analyses we therefore project the number of cases for suicide, i.e. adjusted to an assumed final figure of 99% complete.

For homicide, numbers are too small to calculate projected figures, therefore actual figures are shown.

2.5.2 Case series data

This report presents the findings from the analysis of deaths by suicide and homicides leading to conviction between January 2000 and December 2008. Findings relating to suicides and homicides that occurred between April 1997 and March 2000 were first presented in an earlier report, *Safety First*. (8)

Analyses based on case series data, in the absence of controls, cannot identify risk factors. However, detailed data on the circumstances in which suicides or homicides occur, and the large number of cases in our sample, make it possible to identify ways in which patient care could be strengthened with likely benefits to safety.

In the main body of the report, findings are presented separately for suicide (Chapter 3) and homicide (Chapter 4).

2.5.3 Trends over time

Where possible, data on suicide trends are presented from 1998 (the first full year of Inquiry data collection in Northern Ireland) to 2008. It was not possible to present data on trends for homicide (see section 2.4.2).

To examine for statistically significant time trends, trend tests were carried out using categorical data methods in Stata.(10) Suicide rates per 100,000 population were calculated using mid-year population estimates (age 10 and over). Hence, using either general population suicides or Inquiry cases as the outcome, a general linear model (GLM) was fitted with mid-year population as the offset. Year was then added as a linear predictor to assess trends.

2.5.4 Presentation of data

The report is intended for a broad readership, and the style of presentation aims to balance the requirements of a scientific publication with those of a public document. All abbreviations and technical terminology are listed in the glossary at the end of the report (Appendix 2). For the remainder of this report, "Inquiry cases" will be referred to as patient suicides or patient homicides.

Many of the main figures are presented in tables of "key variables", which are consistent between sections. Ninety-five percent confidence intervals (CIs) are included for all estimates in the key variable tables. These indicate the accuracy of each estimate by showing the range of values within which the true figure is likely to lie. For many of our estimates the sample is large and confidence intervals are correspondingly small. However, figures for smaller patient sub-groups may have wider confidence intervals.

When differences between groups are referred to in the text, these are statistically significant. In most analyses statistical significance has been set at 5%, i.e. there is a 5% probability that a reported difference between groups has arisen by chance. When percentages are quoted, these refer to "valid cases", i.e. those for whom the relevant information was available. In other words, if an item of information was not known about a person, he/she was excluded from the analysis of that item. As a result, the denominator may vary slightly between analyses. An exception to this is the reporting of schizophrenia, and alcohol and drug dependence in the homicide section (sections 4.4 and 4.5). Using valid percentages results in figures which may be overestimated. We therefore report figures for perpetrators with schizophrenia, and alcohol and drug dependence as a percentage of all homicides, although we recognise this may produce an underestimate. This way of reporting also allows for comparison with England and Wales and Scotland figures which have been reported in the same way.

Statistically significant differences between figures presented in this report and the figures for Northern Ireland in our previous report, *Safety First* (8), are highlighted. Comparisons between the figures for Northern Ireland and those reported for Scotland published in *Lessons for Mental Health Care in Scotland* (11), and those reported for England and Wales published in *Avoidable Deaths* (12) and more recent Annual Reports for England and Wales (13, 14) are also provided.

2.5.5 Recommendations

The report presents a series of recommendations that we believe are reasonable given our findings. Consideration of the recommendations within the report, with a view to implementation and resourcing, requires further discussion by those individuals responsible for the development of public health policy and for commissioning future health research.

3. SUICIDE

3.1 SUICIDE IN THE GENERAL POPULATION

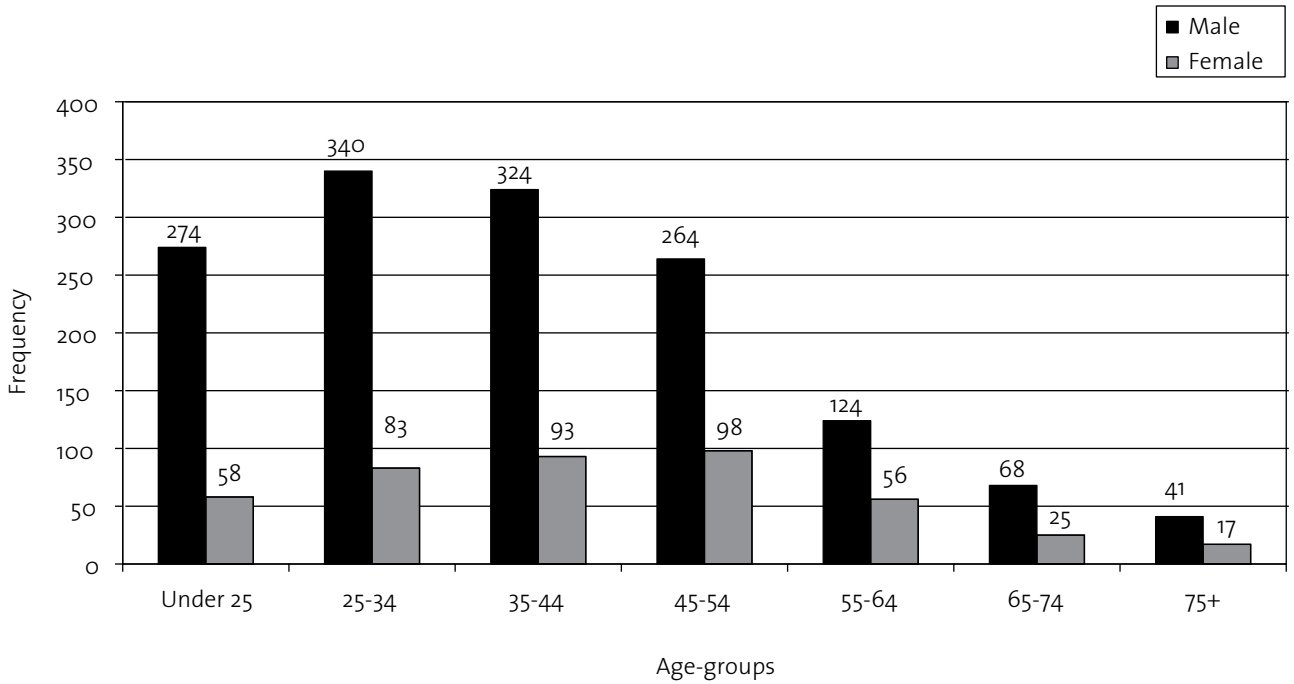
3.1.1 Numbers and rates

The Inquiry was notified of 1,865 suicides and probable suicides occurring between January 2000 and December 2008. This included 1,629 cases in which the recorded cause of death was suicide and 236 open verdicts or deaths of undetermined intent. For the remainder of this report, these cases are referred to as suicides. The number of suicides per year are shown in Table 2 on page 34.

The corresponding average annual rate of suicide during 2000-2008 was 13.9 per 100,000 people, 207 deaths by suicide per year.

One thousand four hundred and thirty-five (77%) were male, giving a male to female ratio of 3.3:1. The ratio of males to females was highest in the under 25 year olds in whom 83% were male and lowest in those aged between 55 and 64, in whom 69% were male (Figure 1). Rates of suicide are shown in (Table 1).

Figure 1: General population suicides notified to the Inquiry aged 10 and over: age and sex profile



For the same time period, the Inquiry was notified of 78 suicides and probable suicides for children and adolescents aged under 18. This included 75 cases where the recorded cause of death was suicide and 3 cases where death was of undetermined intent. The average annual rate of suicide among young people was 4.2 per 100,000. Fifty-five (71%) were male, giving a male to female ratio of 2.4:1.

Younger male suicides were proportionally more likely to be in the ten percent most deprived areas (Figure 2).

3.1.2 Method

Two methods of suicide together accounted for 77% of suicides: hanging/strangulation (referred to as hanging in the remainder of this report) and self-poisoning by overdose (Figure 3). Drowning and firearms accounted for a further 14%. The frequency of methods differed between the sexes: in males the most common method was hanging (59%) followed by self-poisoning (17%); in females, self-poisoning and hanging were equally common (40%).

Table 1: Rates of suicide per 100,000 population by age-group and sex

Age-group	Male rate	Female rate
15-24†	23.0	4.8
25-34	32.5	7.8
35-44	28.9	8.0
45-54	27.9	10.2
55-64	16.1	6.9
65-74	12.9	4.0
75+	11.7	2.8

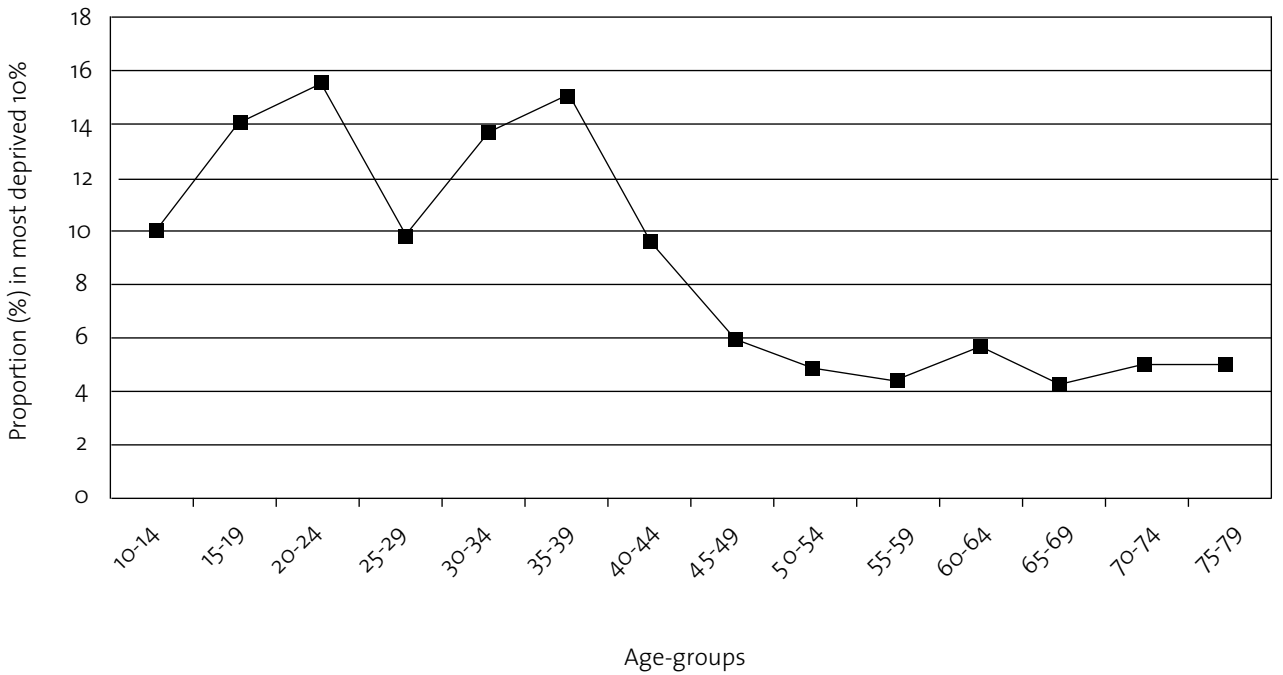
†Under 15's excluded due to small numbers of suicide in this age-group

There were age-related differences in method of suicide. The relative frequency of hanging deaths decreased with increasing age. The highest proportion of deaths by hanging occurred in those under 25 years of age (258 cases; 78%) and was lowest in those aged 65 and over (59 cases, 39%). Conversely, drowning was more common with increasing age, accounting for 15 (5%) cases in those aged under 25, and 36 (24%) cases in those aged 65 and over.

3.1.3 Trends over time

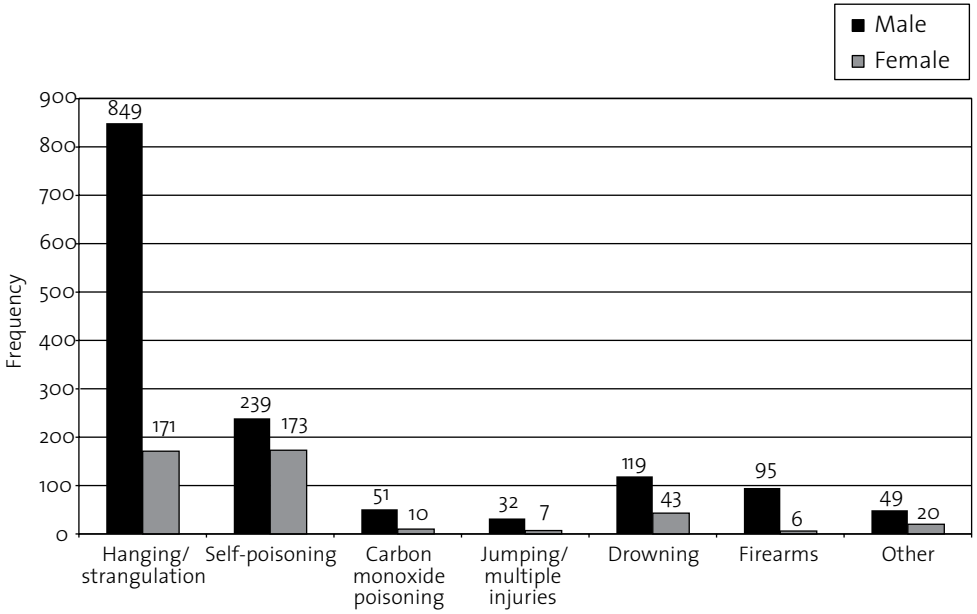
The number and rate of suicides in the general population increased from 1998, the first year of complete data collection (Table 2 and Figure 4). The highest figures were recorded in 2007, the lowest in 2003. Rates of suicide increased for both males and females (Figure 4), and in all age-groups except those under 25. There was an increase in the number of suicides by hanging from 1998, overall and in both males and females (Figure 5).

Figure 2: General population male suicides in Northern Ireland (2005)†: proportion within each age-group who lived in the 10% most deprived areas (Multiple Deprivation Measure)



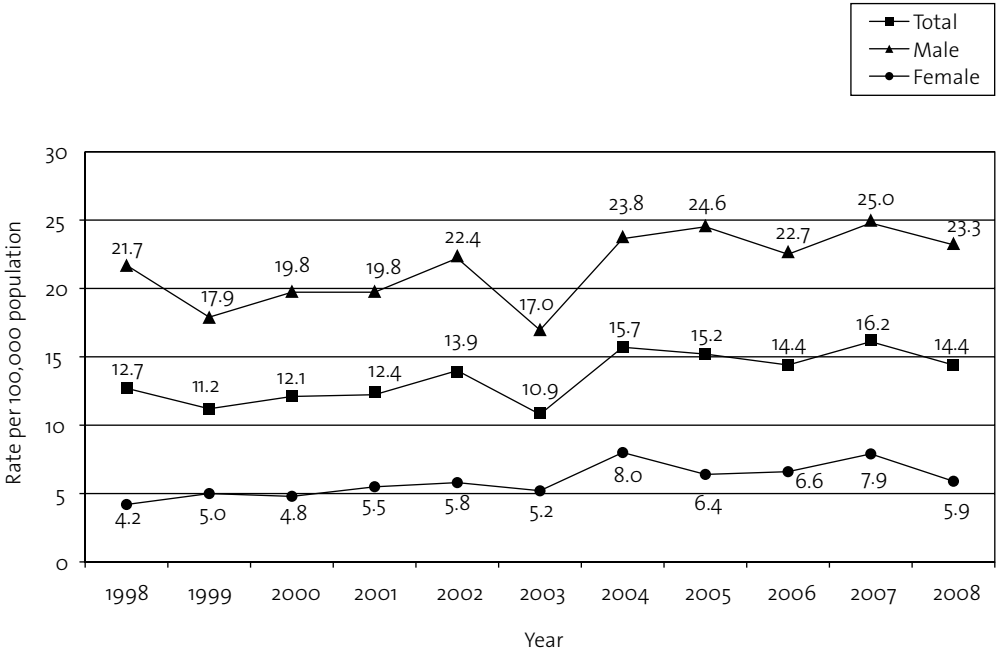
†2005 was the most recent year of data available for the multiple deprivation measure

Figure 3: General population suicides notified to the Inquiry: method by sex



OTHER	Male	Female
Burning	7	5
Cutting or stabbing	22	5
Suffocation	9	5
Electrocution	2	0
Other	9	5
TOTAL	**49**	**20**

Figure 4: Rates of general population suicide by sex (1998-2008)



3.1.4 Summary and comment

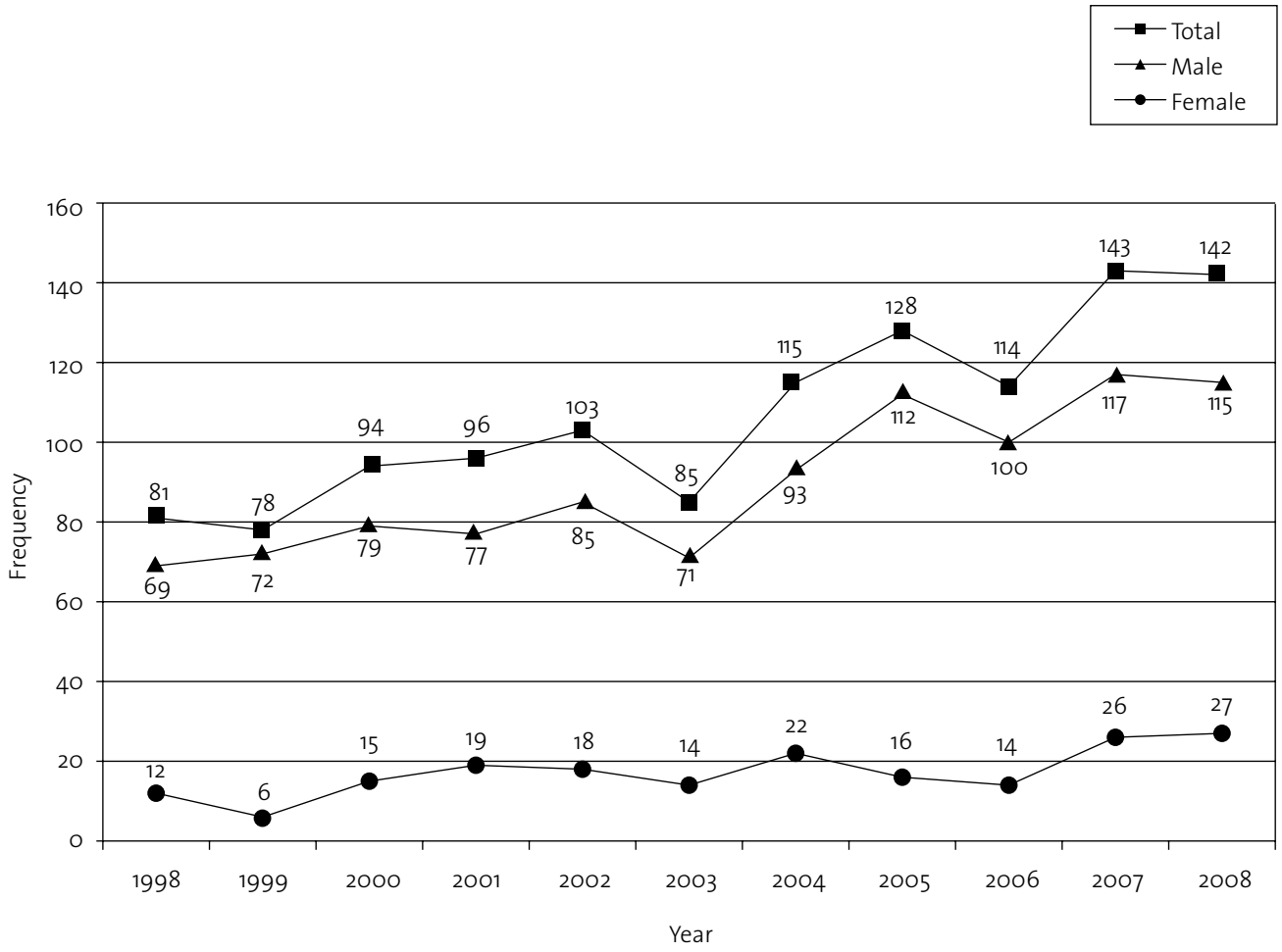
The number and rate of suicide in the general population in Northern Ireland increased from 1998 to 2008. Male suicides outnumbered female suicides by three to one, and the majority of suicides occurred in young and middle aged men, up to the age of 55.

The youngest age-group - those under 25 - showed the greatest male preponderance and the strongest association between suicide and deprivation. However, this age-group was the only one in which the general increase was not found.

Hanging was the most common suicide method, and the number of suicides by hanging increased from 1998 to 2008.

Comparisons with other UK countries are presented in section 3.11.

Figure 5: General population suicides by hanging and sex (1998-2008)



3.2 PATIENT SUICIDES

3.2.1 Numbers and rates

Of the total sample of 1,865 people dying by suicide, 533 (29%) were known to be in contact with mental health services in Northern Ireland in the year before death, i.e. 59 patient deaths per year. There was a significant increase in the number of patient suicides from 1998; the highest recorded in 2007 and the lowest in 2000, although the rate of patient suicide did not change as a proportion of all suicides (Table 2). Questionnaires were returned on 527 cases, an overall response rate of 99%.

The patients were predominantly male but the male to female ratio (2.4:1) was lower than in general population suicides (3.3:1). The proportion of males was highest in those aged under 25 (80%) and in those aged 65-74 (79%) (Figure 6). Forty-six (9%) were aged 65 and over.

Figure 6: Patient suicide: age and sex profile

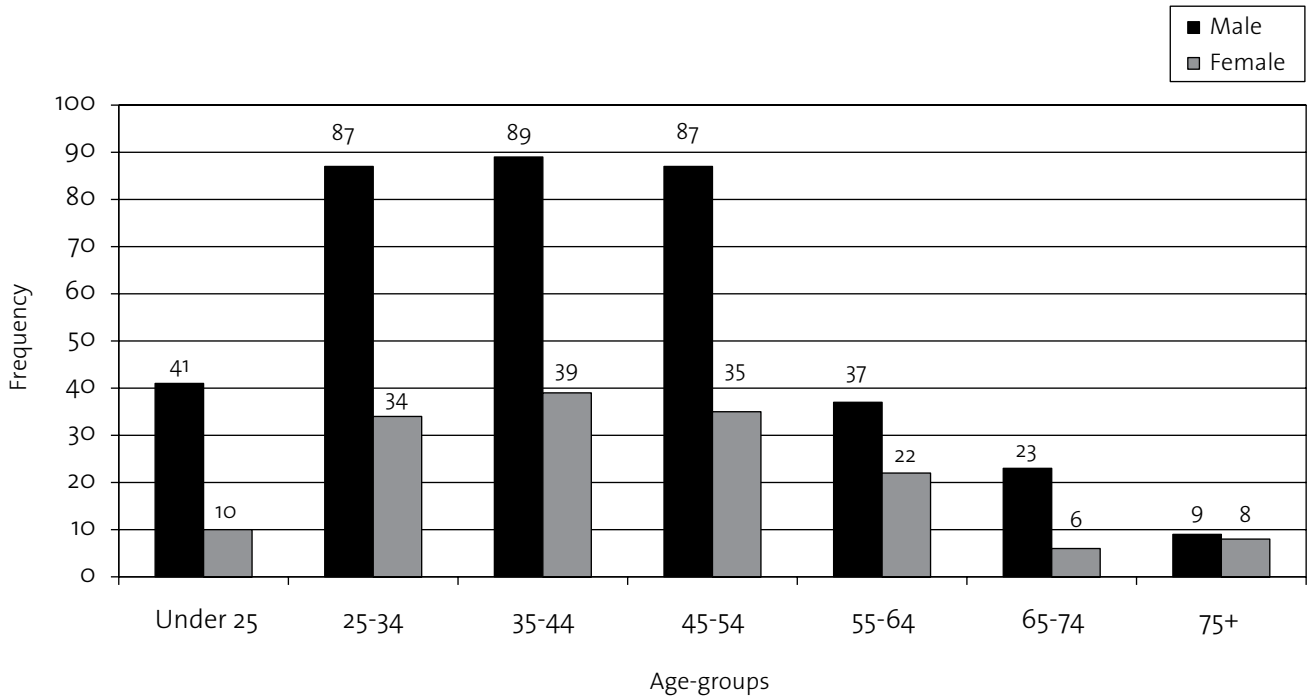


Table 2: Number of general population and patient suicides aged 10 and over (1998-2008)

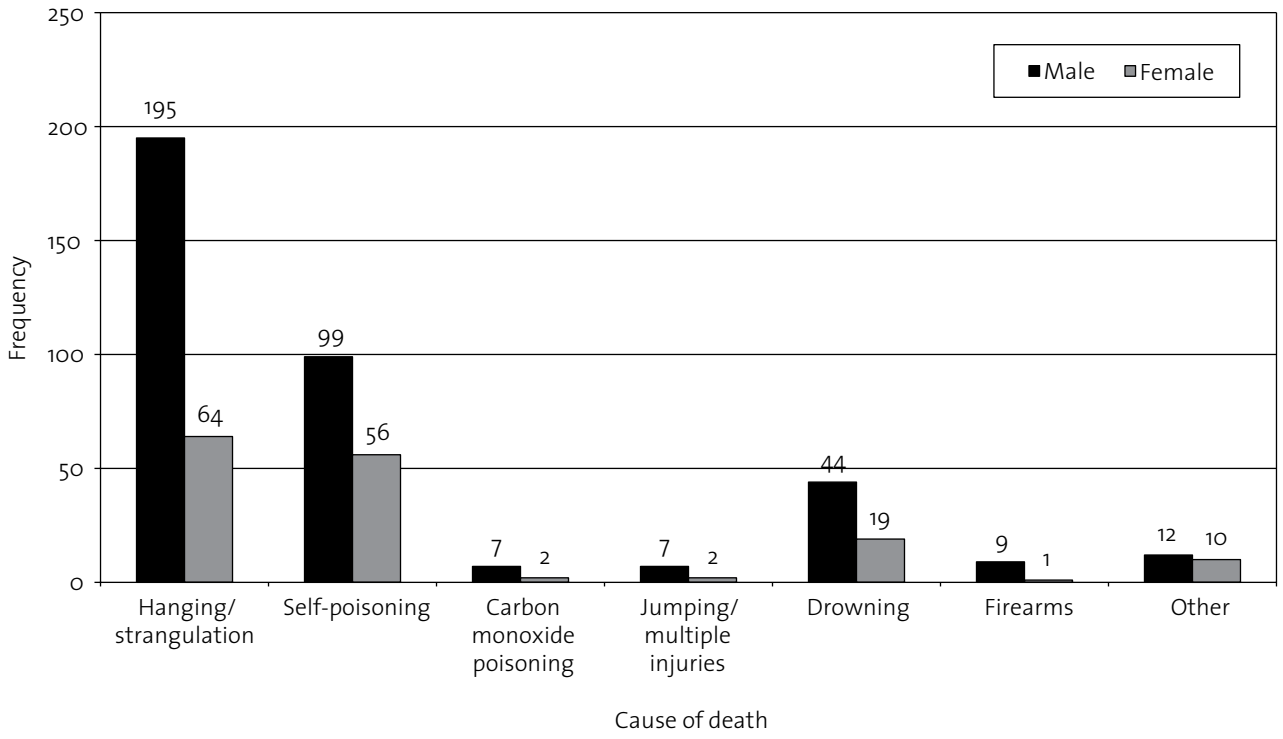
Year	General population suicides	Patient suicides	Patient suicides as % of total	Patient suicide rate per 100,000 general population
1998	181	61	34	4.3
1999	161	45	28	3.1
2000	174	37	21	2.6
2001	180	57	32	3.9
2002	203	65	32	4.4
2003	160	45	28	3.1
2004	232	71	31	4.8
2005	228	63	28	4.2
2006	218	58	27	3.8
2007	248	72	29	4.7
2008	222	63	28	4.1

3.2.2 Method

The most common methods of suicide used by patients overall were hanging and self-poisoning, together accounting for 79% of deaths (Figure 7), although in patients over 55 years drowning was more common than self-poisoning. On average, there were 29 suicides by hanging and 17 by self-poisoning per year. Hanging was the most common method in both sexes.

Those who died by self-poisoning were more likely to use psychotropic drugs and analgesics, including opiates. The main psychotropic drugs used were benzodiazepines/hypnotics (13 cases, 12% of overdose cases). In 10 (9%) cases of overdose (2% of all suicides) paracetamol was the main cause of death.

Figure 7: Patient suicide: method



SELF-POISONING	Male	Female
Psychotropic drug	26	17
Paracetamol	7	3
Opiate	13	10
Other analgesic	12	3
Other/unknown	41	23
TOTAL	**99**	**56**

OTHER	Male	Female
Burning	2	2
Cutting or stabbing	6	3
Suffocation	3	2
Other/unknown	1	3
TOTAL	**12**	**10**

3.2.3 Social characteristics

The main social characteristics of patient suicides are presented in Table 3. Personal and economic circumstances that might be considered indicators of adversity and isolation, were common. The majority of patients were unmarried (Figure 8) and out of work (either unemployed or on long-term sick leave) (Figure 9). The proportion of people unemployed was particularly high in the under 35's - 92 of 164 (56%). Overall, 1% were from a black and minority ethnic (BME) group. Forty-one percent lived alone (Figure 10) and one percent were homeless or of no fixed abode.

3.2.4 Clinical characteristics

The main clinical characteristics of patient suicides are presented in Table 3.

Behavioural characteristics

There were high rates of alcohol misuse (60%) and drug misuse (34%) and 149 (29%) were misusing both alcohol and drugs. In 17% alcohol dependence was the primary diagnosis; in 5% this was drug dependence.

Seventy-one percent had a history of self-harm; 21% had a history of violence. Previous self-harm, violence, alcohol misuse and drug misuse were proportionately more frequent in the younger age-groups.

Figure 8: Patient suicide: marital status

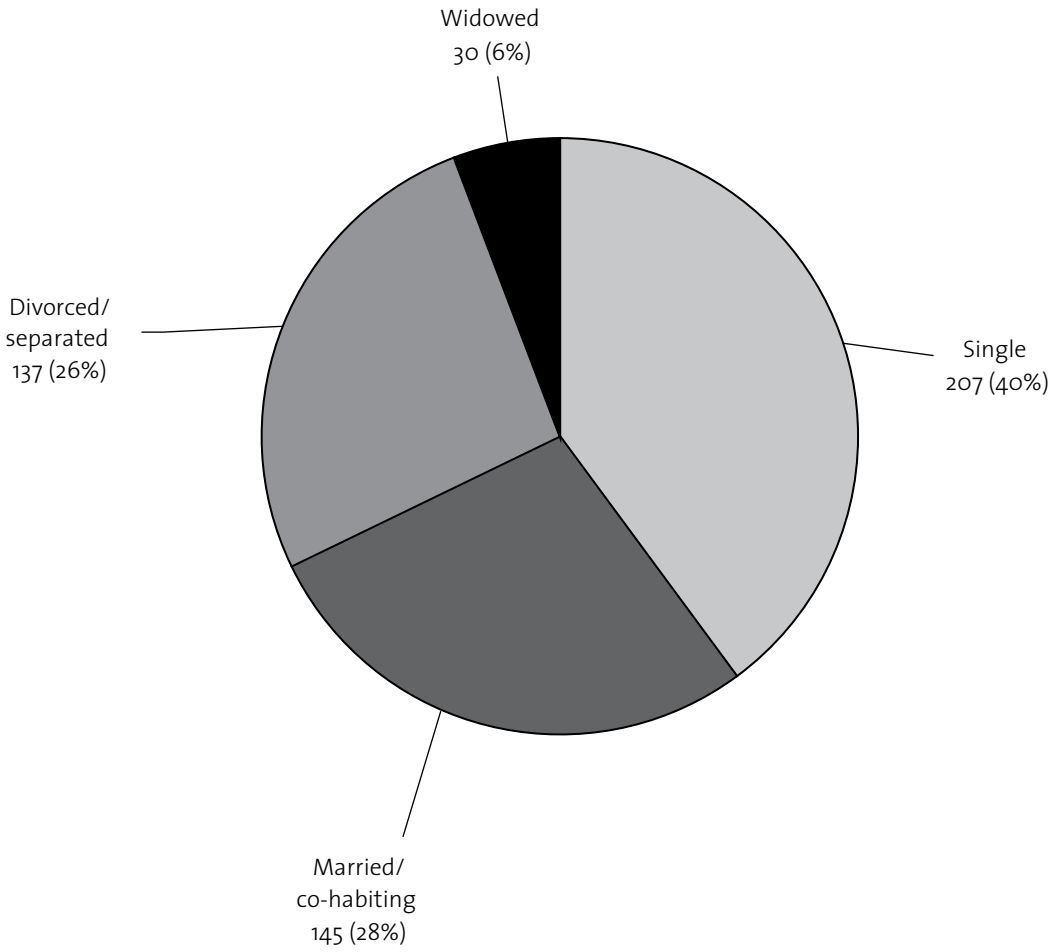


Table 3: Social and clinical characteristics of patient suicides

	Number (527)	%	(95% CI)
Demographic features			
Age: median (range)	41 (16-88)	-	
Male	373	71	(67-75)
Black & minority ethnic groups	6	1	(0-2)
Not currently married	374	72	(68-76)
Unemployed	199	39	(35-44)
Long-term sick	110	22	(18-26)
Living alone	205	41	(36-45)
Homeless	5	1	(0-2)
Priority groups			
In-patients	35	7	(5-9)
Post-discharge patients	125	25	(22-30)
Missed last contact	129	27	(23-31)
Treatment refusal in last month	56	12	(9-15)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	80	15	(12-19)
Affective disorder (bipolar disorder & depression)	188	36	(32-40)
Alcohol dependence	91	17	(14-21)
Drug dependence	24	5	(3-7)
Personality disorder	53	10	(8-13)
Any secondary diagnosis	303	58	(53-62)
Duration of mental illness (under 12 months)	97	19	(16-23)
Over 5 previous admissions	91	17	(14-21)
Last admission was a re-admission	65	19	(15-24)

Table 3: Social and clinical characteristics of patient suicides (continued)

	Number (527)	%	(95% CI)
Behavioural features			
History of self-harm	369	71	(67-75)
History of violence	104	21	(17-24)
History of alcohol misuse	316	60	(56-65)
History of drug misuse	175	34	(30-39)
Contact with services			
Last contact within 7 days of death	215	41	(37-45)
Symptoms at last contact	318	62	(58-66)
Estimate of immediate risk: low or none	450	90	(87-93)
Estimate of long-term risk: low or none	279	56	(52-60)
Suicide thought to be preventable	44	9	(7-12)

Figure 9: Patient suicide: employment status

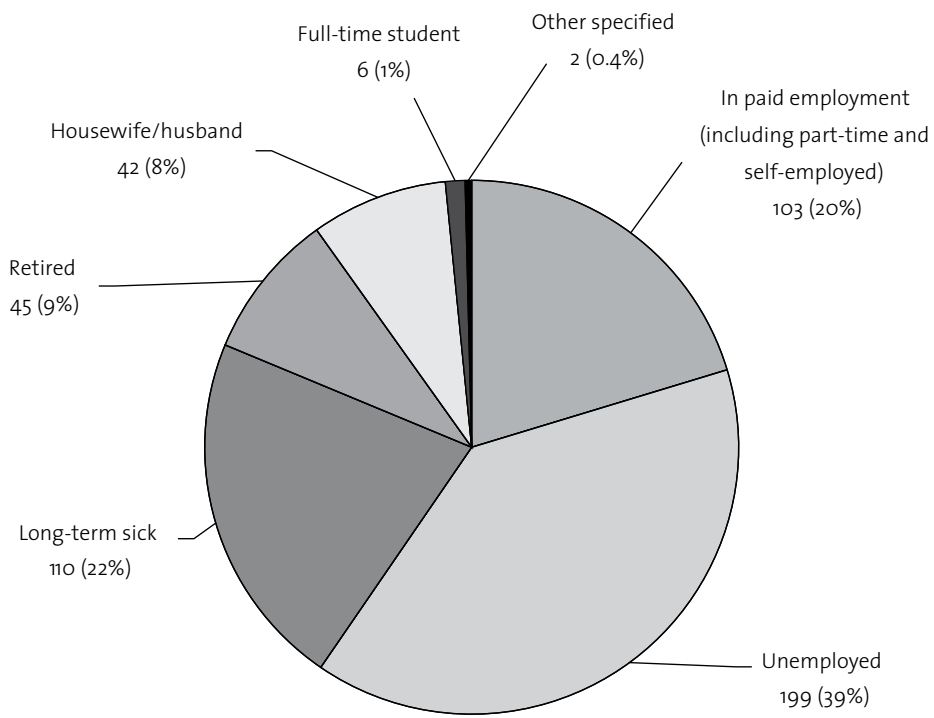
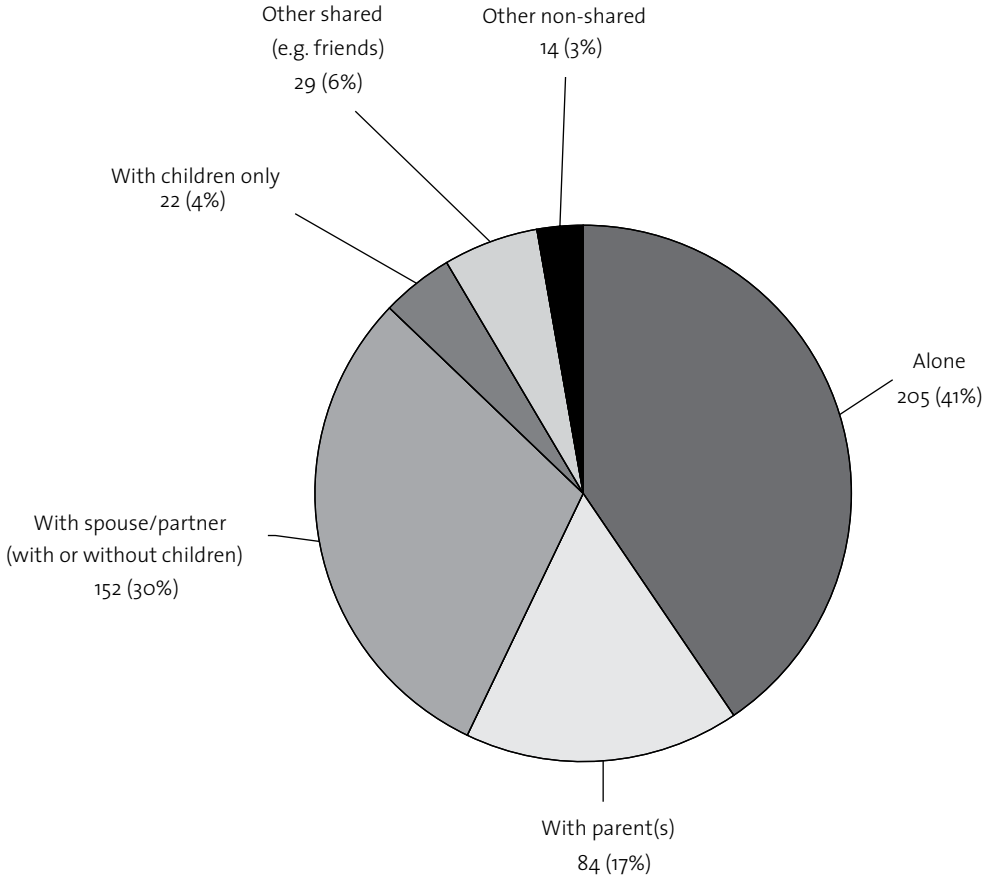


Figure 10: Patient suicide: living circumstances

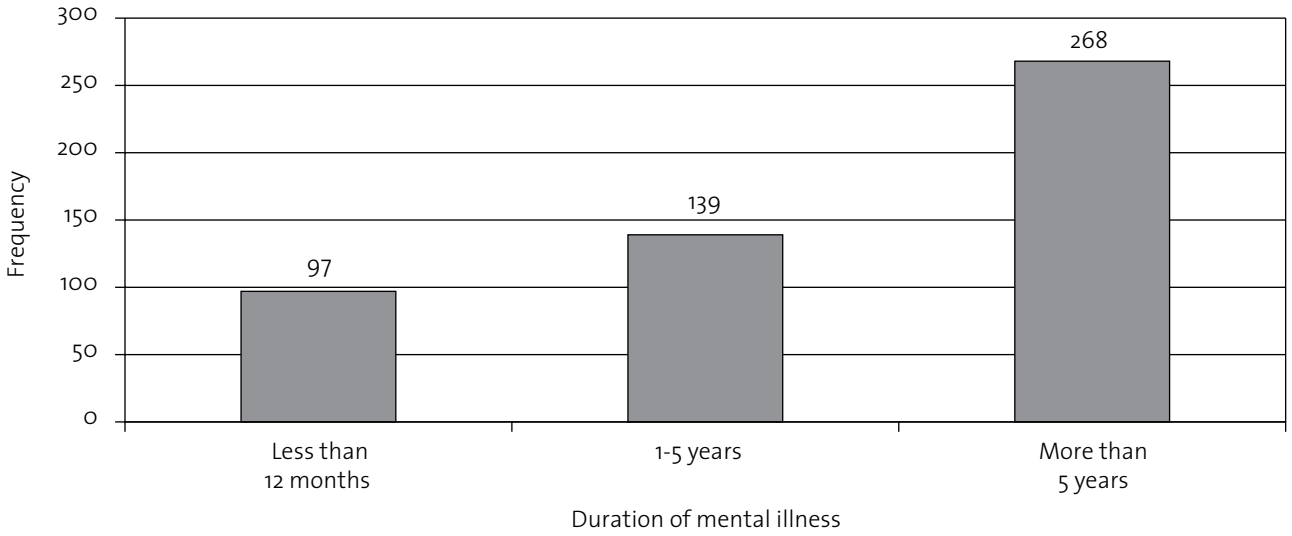


Duration of illness

Suicides were relatively common in the first year after the onset of illness when 19% occurred (Figure 11). This proportion was greater in those aged 65 and over (17 cases, 39%).

This "early mortality" group were more likely to be suffering from affective disorder compared to those who had been ill for longer than a year (51 cases, 53% v. 136 cases, 33%). They were proportionally less likely to have a history of self-harm (57 cases, 59% v. 300 cases, 73%), violence (5 cases, 5% v. 97 cases, 24%), alcohol misuse (44 cases, 46% v. 259 cases, 63%) and drug misuse (16 cases, 17% v. 156 cases, 39%).

Figure 11: Patient suicide: duration of mental illness



Multiple previous admissions

One hundred and forty-nine (28%) patients had never had an in-patient admission. Ninety-one (17%) had had more than five previous admissions. People with multiple previous admissions showed features of more severe mental illness and more frequent indicators of risk. For example, they were more likely to be an in-patient, to have schizophrenia or personality disorder, to have a history of previous violence, to live alone, or be on long-term sick leave.

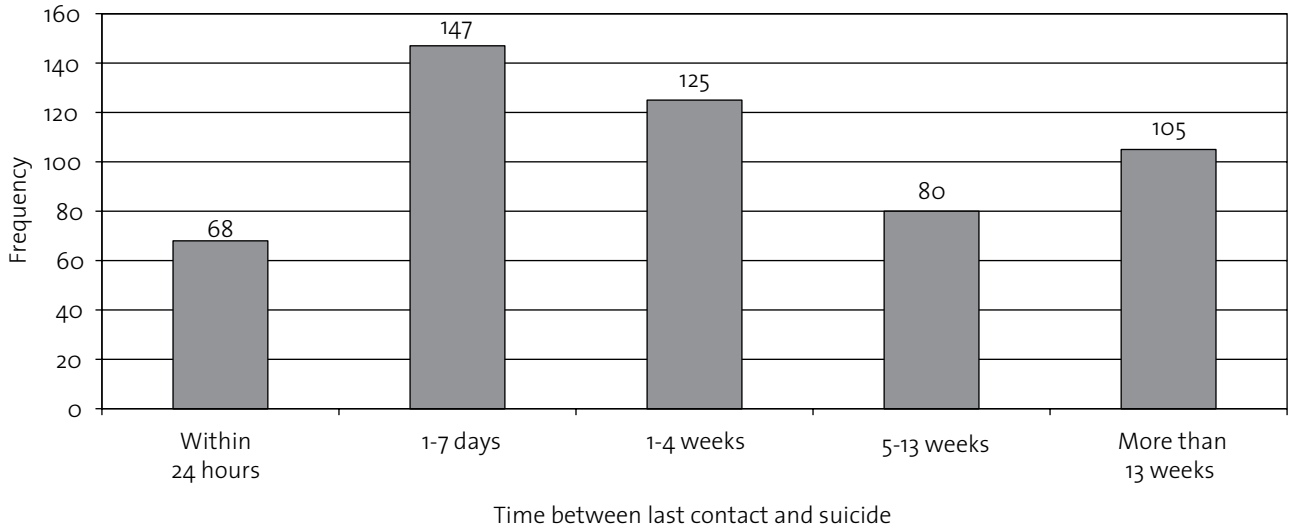
A longer duration of illness was strongly associated with multiple admissions. However, there were 49 cases (18%) who had been ill for more than five years without being admitted.

Nature of last contact

Thirteen percent were in contact with services in the 24 hours before death (Figure 12). In a further 28%, the last contact was between 1 and 7 days before death. In 367 cases (71%), the contact was routine rather than urgent – a similar figure was found even when the contact occurred within 24 hours of death (46 cases, 69%).

In 477 (91%) patients, the final contact was face-to-face, usually with a consultant or junior psychiatrist, or a mental health nurse. In 312 (60%) it took place at a hospital and in 101 (20%) in the patient's home.

Figure 12: Patient suicide: timing of last contact with mental health services



Symptoms at last contact

Assessment at the final contact with services revealed abnormalities of mental state or recent behaviour in 318 (62%) patients (Figure 13). Most commonly this was emotional distress (28%), depressive illness (23%), increased use of alcohol (22%) or recent self-harm (15%).

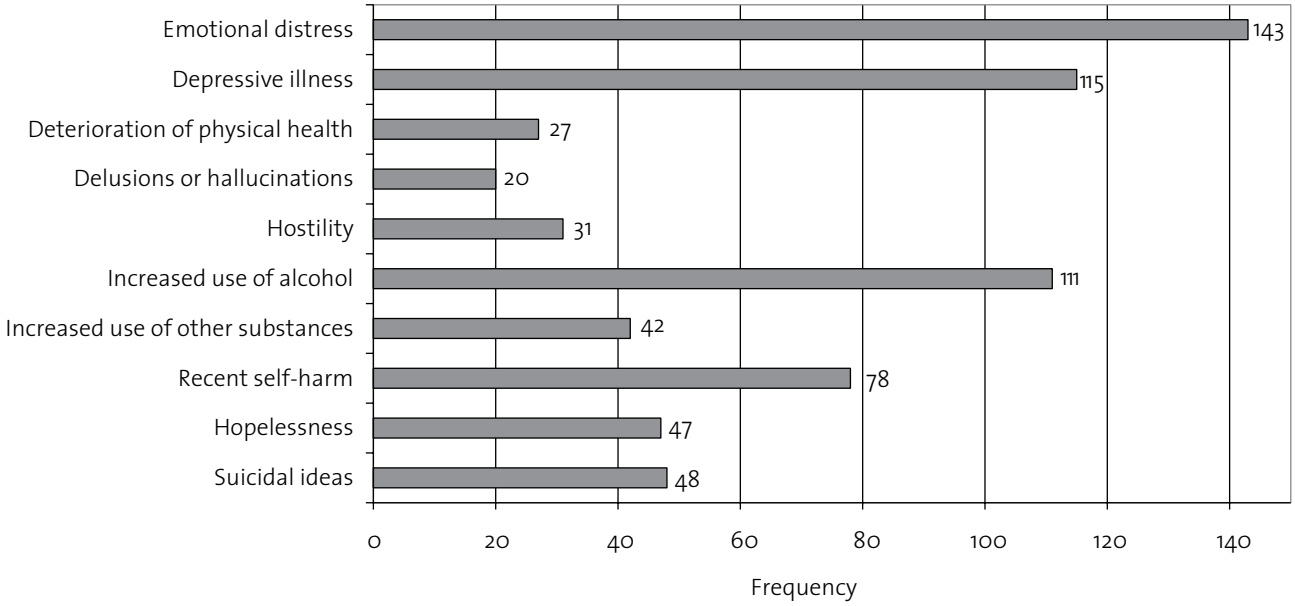
Contact with families

Following the death, the mental health team were in contact with the patient's family in 298 (62%) cases, usually face-to-face or by telephone. In 359 cases (74%), a multidisciplinary review of the case was held. In 96 cases (21%), neither a review nor contact with the family took place.

Life events

Life events data were recorded for 440 cases. In 192 (44%) there was a history of one or more adverse life events in the three months leading up to the suicide. Problems in relationships were most common, occurring in 48%. Thirteen percent of suicides were preceded by bereavement. Other frequently reported life events were workplace problems, including unemployment (13%), legal problems (12%), accommodation problems (11%) and health problems (9%).

Figure 13: Patient suicide: symptoms at last contact with mental health services

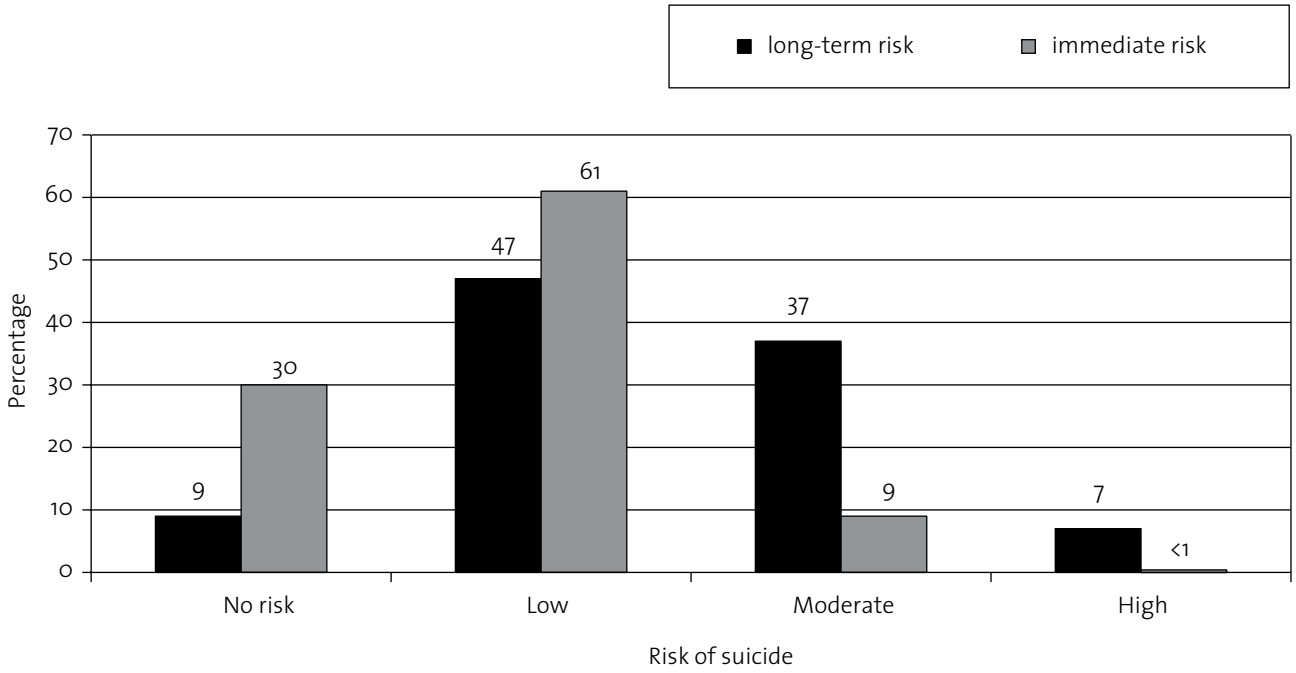


3.2.5 Risk

The questionnaire asks clinicians to indicate to what extent patients were thought to be at risk of suicide at the time of final service contact. High immediate risk was identified in 2 cases (<1%) while high long-term risk was identified in 37 (7%) patients. Immediate risk of suicide was estimated to be low or absent in 90% of cases while long-term risk was thought to be low or absent in 56% of cases (Figure 14). These estimates of risk were higher for patients seen by services in the week prior to death.

Table 4 lists the factors associated with staff judgements that risk was moderate or high.

Figure 14: Patient suicide: mental health teams' estimation of suicide risk at last contact



Statistical note: Low or absent immediate risk totals 91% due to rounding

Table 4: Patient suicide: factors associated with estimation of risk as high or moderate

Both immediate and long-term risk
History of self-harm
Personality disorder
Last contact within 7 days of death
Post-discharge patients
Symptoms at last contact
Last admission was a re-admission
Immediate risk only
None
Long-term risk only
Younger age
Living alone
Unemployed
Unmarried
Missed last appointment
Duration of mental illness more than 12 months
Any secondary diagnosis
Over 5 previous admissions
History of violence
History of alcohol misuse
History of drug misuse

3.3 PATIENT SUB-GROUPS

3.3.1 Psychiatric diagnoses

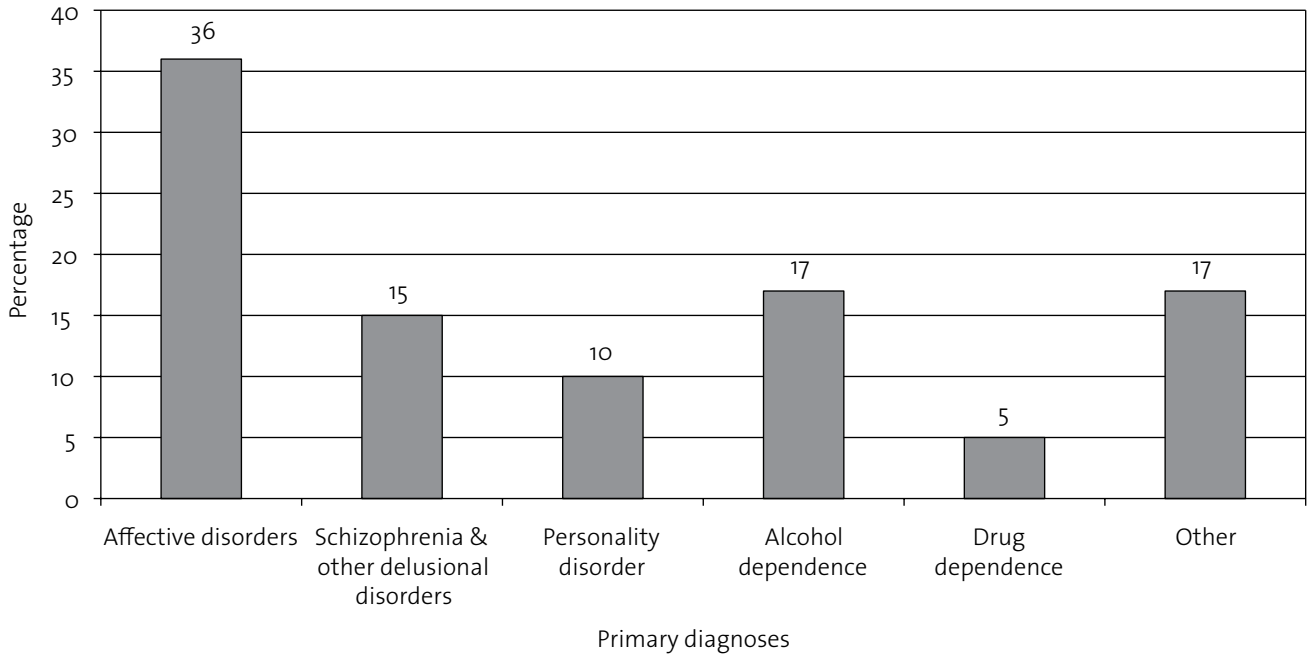
Primary diagnoses are presented in Figure 15. Schizophrenia, affective disorder and personality disorder are discussed below. Alcohol dependence and drug dependence are discussed in section 3.7.

Three hundred and three patients (58%) had at least one secondary (co-morbid) diagnosis, most often alcohol dependence (17%) or depressive disorder (15%). Co-morbidity was least common in those aged 65 and over (41%) (Table 6).

Schizophrenia

Eighty (15%) patients had a primary diagnosis of schizophrenia. Hanging was the most common suicide method but they were more likely to die by drowning (19%) and jumping from a height or in front of a vehicle (9%) compared to other diagnostic groups. They were more likely to be male (83%), unmarried (85%), from a black and minority ethnic group (5%) and on long-term sick leave (45%). Fewer cases with schizophrenia had a history of self-harm (55%) or alcohol misuse (50%). Multiple previous admissions were more common (40%), as was contact with services in the week before death (63%). Fewer had shown symptoms of mental illness at last contact (48%).

Figure 15: Patient suicide: primary diagnoses



Affective disorder

One hundred and eighty-eight (36%) patients had a primary diagnosis of affective disorder. They were less likely to die by self-poisoning (22%) compared to other diagnostic groups. They were more likely to be aged 45 and over (56%), female (38%), married (41%), and retired (16%). They were less likely to have a secondary diagnosis (50%) or to have a history of violence (8%), alcohol misuse (42%) or drug misuse (14%). The death more frequently occurred in the first year of illness (27%). They were more likely to be in-patients (10%) at the time of death and less likely to have missed their last appointment with services (19%) or to have had multiple previous admissions (13%).

Personality disorder

Fifty-three (10%) patients had a primary diagnosis of personality disorder. Self-poisoning was the most common suicide method (45%), and more common than other diagnostic groups. They were more likely to be aged under 45 (79%), female (45%) and unemployed (73%). They had the highest rate of self-harm (92%), previous violence (43%) and drug misuse (59%). They were more likely to have had over 5 previous admissions (36%), to have been ill for longer than 5 years (81%) and to have a secondary diagnosis (85%). Forty-one percent had missed their last appointment. They were considered to be at higher short-term (24%) and long-term risk (82%) but their deaths were not seen as more or less preventable (8%).

3.3.2 People with a history of self-harm

Three hundred and sixty-nine (71%) patients had a history of self-harm: 256 males (69% of 369 males) and 113 females (75% of 151 females). One hundred and thirty-five (37%) patients had self-harmed within 3 months of death. Patients with a history of self-harm were younger than other cases and more likely to be unemployed (42%) and unmarried (75%). Proportionally more had died by self-poisoning (33%). They were more likely to have personality disorder (13%) and less likely to have schizophrenia (12%). More had a concurrent co-morbid diagnosis (64%). Rates of previous violence (24%), alcohol misuse (67%) and drug misuse (38%) were higher. More had been ill for longer than a year (84%), had missed their last appointment with services (30%) or had died within 3 months of hospital discharge (29%). They were considered to be at higher short-term (12%) and long-term risk (55%) but their deaths were not seen as more or less preventable (10%).

3.3.3 People aged under 25

There were 51 suicides among patients under 25 years, 10% of the total patient sample (Figure 6). People in this age-group were less likely to have been in recent contact with mental health services, 15% compared to 29% overall. Key characteristics of these cases are presented in Table 5.

The method of suicide was more likely to be hanging (40 cases, 78%) compared to older cases. The most common diagnosis was affective disorder. Previous drug misuse in this group was more common, and they were more likely to have reported symptoms of mental illness at last contact.

3.3.4 People aged 65 and over

There were 46 suicides among patients aged 65 and over, 9% of the total sample (Figure 6). Key characteristics of these cases are presented in Table 6.

The most common methods of suicide were hanging (17 cases, 37%), drowning (15 cases, 33%) and self-poisoning (8 cases, 17%). The majority of those aged 65 and over had affective disorder. Compared to younger suicides, they were less likely to have alcohol dependence or a co-morbid psychiatric diagnosis. They had lower rates of previous alcohol misuse, drug misuse and self-harm. There were no cases of patients aged 65 and over with a history of violence. Over a third had been ill for less than a year, proportionally more than younger patients. Fewer had missed their last appointment. Long-term risk was less likely to be viewed as moderate or high (10 cases, 23%).

Table 5: Social and clinical characteristics of patient suicides aged under 25

	Number (51)	%	(95% CI)
Demographic features			
Male	41	80	(67-90)
Black & minority ethnic groups	0	-	
Not currently married	45	90	(78-97)
Unemployed	36	73	(59-85)
Living alone	12	24	(13-39)
Priority groups			
In-patients	1	2	(0-10)
Post-discharge patients	8	16	(7-29)
Missed last contact	10	20	(10-34)
Treatment refusal in last month	8	20	(9-35)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	7	14	(6-27)
Affective disorder (bipolar disorder & depression)	15	30	(18-45)
Alcohol dependence	6	12	(5-24)
Drug dependence	5	10	(3-22)
Personality disorder	6	12	(5-24)
Any secondary diagnosis	27	54	(39-68)
Duration of mental illness (under 12 months)	10	20	(10-34)
Over 5 previous admissions	3	6	(1-16)
Last admission was a re-admission	6	29	(11-52)

Table 5: Social and clinical characteristics of patient suicides aged under 25 (continued)

	Number (51)	%	(95% CI)
Behavioural features			
History of self-harm	37	73	(58-84)
History of violence	11	23	(12-37)
History of alcohol misuse	35	70	(55-82)
History of drug misuse	32	65	(50-78)
Contact with services			
Last contact within 7 days of death	14	27	(16-42)
Symptoms at last contact	40	80	(66-90)
Estimate of immediate risk: low or none	45	92	(80-98)
Estimate of long-term risk: low or none	28	57	(42-71)
Suicide thought to be preventable	3	7	(1-18)

Table 6: Social and clinical characteristics of patient suicides aged 65 and over

	Number (46)	%	(95% CI)
Demographic features			
Male	32	70	(54-82)
Black and minority ethnic groups	1	2	(0-12)
Not currently married	29	63	(48-77)
Living alone	22	50	(35-65)
Unemployed	0	-	
Priority groups			
In-patients	5	11	(4-24)
Post-discharge patients	11	27	(14-43)
Missed last contact	4	10	(3-24)
Treatment refusal in last month	7	16	(7-30)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	5	11	(4-24)
Affective disorder (bipolar disorder & depression)	32	70	(54-82)
Alcohol dependence	1	2	(0-12)
Drug dependence	0	-	
Personality disorder	1	2	(0-12)
Any secondary diagnosis	19	41	(27-57)
Duration of mental illness (under 12 months)	17	39	(24-55)
Over 5 previous admissions	8	17	(8-31)
Last admission was a re-admission	8	29	(13-49)

Table 6: Social and clinical characteristics of patient suicides aged 65 and over (continued)

	Number (46)	%	(95% CI)
Behavioural features			
History of self-harm	26	57	(41-71)
History of violence	0	-	
History of alcohol misuse	12	27	(15-42)
History of drug misuse	3	7	(1-18)
Contact with services			
Last contact within 7 days of death	20	43	(29-59)
Symptoms at last contact	21	46	(31-61)
Estimate of immediate risk: low or none	42	93	(82-99)
Estimate of long-term risk: low or none	34	77	(62-89)
Suicide thought to be preventable	3	7	(1-19)

3.4 IN-PATIENTS

There were 35 in-patient deaths by suicide during the study period, 7% of patient suicides, an average of 4 deaths per year. The key characteristics of the 35 cases are given in Table 7.

3.4.1 Social and clinical characteristics

Social features were similar to those of the sample as a whole. Thirty-seven percent had more than 5 previous admissions compared to 16% of other patients who died by suicide. They were less likely to have a primary diagnosis of alcohol dependence (3% v. 18%) or a history of alcohol misuse (40% v. 62%). More in-patients had been ill for less than a year (34% v. 18%).

3.4.2 Method

The suicide methods used by in-patients were different from those of the patient sample as a whole. By far the most common method was hanging (19 cases, 54%), followed by drowning (7 cases, 20%). In-patients were more likely to die by jumping (3 cases, 9% v. 6 cases, 1%). There were no in-patients who died by self-poisoning. Of deaths that occurred on the ward itself (7 cases), 3 were by hanging, 3 by suffocation and 1 by electrocution.

3.4.3 Timing, location and care

There was no characteristic time of the day when in-patient suicides occurred and overall there was no evidence of clustering "out of hours".

Seven (20%) in-patient suicides occurred on the ward itself, 16 (46%) took place at a distance from the hospital, while 12 (34%) occurred in or around the hospital grounds/premises. In those that occurred off the ward, 15 (54%) were on agreed leave or had left with staff agreement, but 13 (46%) had left without staff agreement.

The majority of in-patients were under routine care at the time of suicide, being voluntary patients (30 cases, 86%), on an open ward (28 cases, 85%) and under routine observation (12 cases, 60%). However, 5 (14%) were detained under the Mental Health Act (MHA). Eight (40% of 20 valid cases) were under special (i.e. non-routine) observation, including 1 under one-to-one observation.

3.4.4 Risk and preventability

As in the sample as a whole, the majority of in-patients (33 cases, 94%) were thought to be at low or no immediate risk at last contact. A minority of in-patient suicides were seen as preventable (7 cases, 21%), although this was more than in the rest of the sample (37 cases, 8%).

Table 7: Characteristics of in-patient suicides

	Number (35)	%	(95% CI)
Demographic features			
Age: median (range)	45 (24-81)	-	
Male	25	71	(54-85)
Black & minority ethnic groups	0	-	
Not currently married	24	69	(51-83)
Unemployed	8	23	(10-40)
Long-term sick	11	31	(17-49)
Living alone	15	43	(26-61)
Homeless	0	-	
Priority groups			
Treatment refusal in last month	2	6	(1-20)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	8	23	(10-40)
Affective disorder (bipolar disorder & depression)	19	54	(37-71)
Alcohol dependence	1	3	(0-15)
Drug dependence	0	-	
Personality disorder	2	6	(1-19)
Any secondary diagnosis	23	66	(48-81)
Duration of mental illness (under 12 months)	12	34	(19-52)
Over 5 previous admissions	13	37	(21-55)

Table 7: Characteristics of in-patient suicides (continued)

	Number (35)	%	(95% CI)
Behavioural features			
History of self-harm	25	71	(54-85)
History of violence	7	21	(9-38)
History of alcohol misuse	14	40	(24-58)
History of drug misuse	7	20	(8-37)
Contact with services			
Symptoms at last contact	21	62	(44-78)
Estimate of immediate risk: low or none	33	94	(81-99)
Estimate of long-term risk: low or none	22	63	(45-79)
Suicide thought to be preventable	7	21	(9-38)
Admission features			
Died within first week of admission	5	16	(5-33)
Died under out-of-area treatment	5	16	(5-33)
Died on the ward	7	20	(8-37)
Suicide during period of planning discharge	10	29	(15-46)
Detained under MHA	5	14	(5-30)
Observation problems with ward design	8	24	(11-41)
Observation problems with other patients	1	3	(0-16)
High/medium level observation	8	40	(19-64)

3.5 PATIENTS RECENTLY DISCHARGED FROM HOSPITAL

In total, 492 (93%) suicides occurred in patients living in the community. There were 125 suicides within three months of discharge from in-patient care, representing 24% of the patient sample and 25% of suicides by community patients. The key characteristics for this group are given in Table 8.

3.5.1 Social and clinical characteristics

The characteristics of patients whose suicides occurred within three months of hospital discharge were broadly similar to those of the whole sample. They were more likely to have been in contact with services in the week prior to death and fewer had missed their last appointment with services. Immediate (15%) and long-term (58%) risk was more often viewed as moderate or high but these deaths were not viewed as more preventable.

3.5.2 Final admission

In 108 (88%) the final admission was voluntary. In 40 (33%) this admission lasted less than seven days, similar to later community patient suicides (31%). Re-admissions within three months of a previous discharge from in-patient care were more common in post-discharge suicides. Discharge from final admission was planned in 89 (72%) and patient-initiated (see Glossary, Appendix 2) in 34 (28%). In the 34 patient-initiated discharges, 17 patients had requested the discharge, 15 had discharged themselves and 2 had been discharged following a breach of ward rules. Most post-discharge patients (111, 92%) had a follow-up appointment arranged on discharge but in 27 (24%) the suicide took place before this appointment. A similar proportion of patients as a whole were seen as preventable.

3.5.3 Timing

Post-discharge suicides were most frequent in the week after leaving hospital when 24 deaths occurred (Figure 16), 5% of all patient suicides and 20% of post-discharge deaths. Within the first week, the highest number of suicides was on the first day after discharge, when 8 deaths occurred.

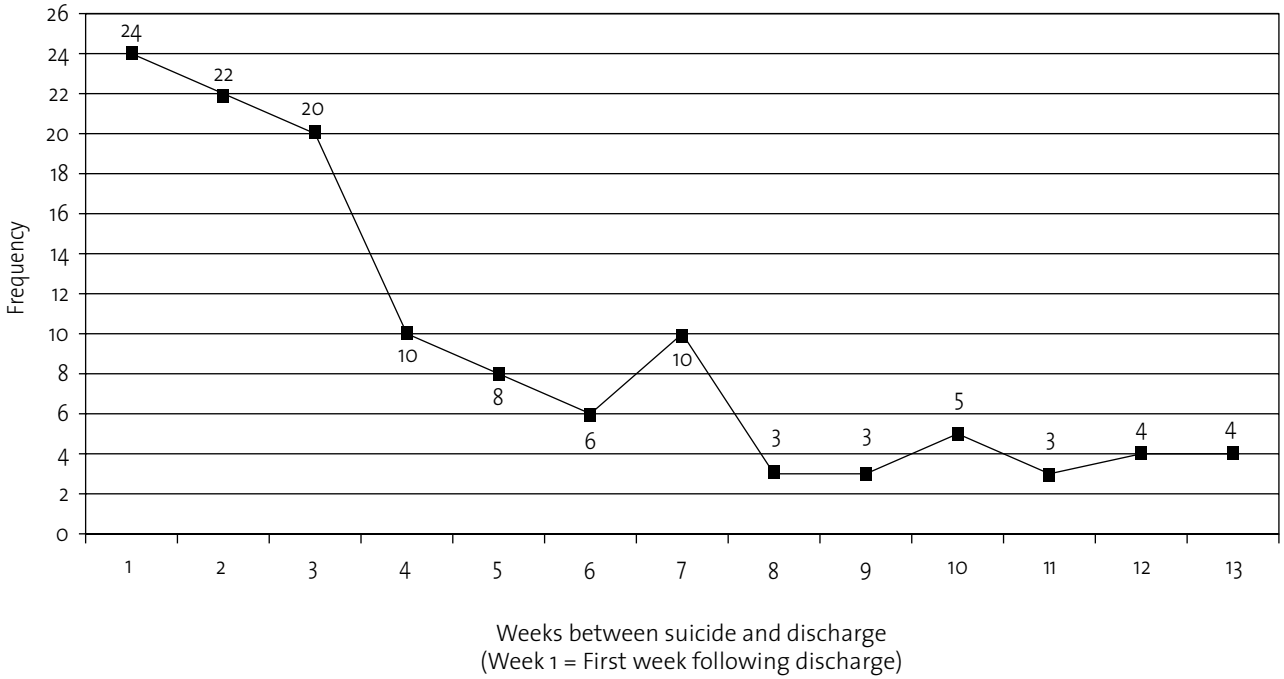
Table 8: Social and clinical characteristics of patient suicides within three months of in-patient discharge

	Number (125)	%	(95% CI)
Demographic features			
Age: median (range)	44 (16-81)	-	
Male	88	70	(62-78)
Black & minority ethnic groups	0	-	
Not currently married	94	75	(67-82)
Unemployed	46	37	(29-47)
Long-term sick	33	27	(19-36)
Living alone	50	41	(32-50)
Homeless	3	2	(1-7)
Priority groups			
Missed last contact	23	19	(12-27)
Treatment refusal in last month	11	9	(5-16)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	22	18	(11-25)
Affective disorder (bipolar disorder & depression)	46	37	(28-46)
Alcohol dependence	18	14	(9-22)
Drug dependence	7	6	(2-11)
Personality disorder	14	11	(6-18)
Any secondary diagnosis	73	58	(49-67)
Duration of mental illness (under 12 months)	27	22	(15-30)
Over 5 previous admissions	33	26	(19-35)
Last admission was a re-admission	32	26	(19-35)

Table 8: Social and clinical characteristics of patient suicides within three months of in-patient discharge (continued)

	Number (125)	%	(95% CI)
Behavioural features			
History of self-harm	100	83	(75-89)
History of violence	24	20	(13-28)
History of alcohol misuse	82	66	(57-74)
History of drug misuse	43	35	(26-44)
Contact with services			
Last contact within 7 days of death	74	60	(50-68)
Symptoms at last contact	66	54	(45-63)
Estimate of immediate risk: low or none	101	85	(77-91)
Estimate of long-term risk: low or none	50	42	(33-51)
Suicide thought to be preventable	12	10	(5-17)

Figure 16: Number of suicides per week following discharge



3.6 TREATMENT REFUSAL AND MISSED CONTACT

3.6.1 Treatment refusal

There were 56 suicides in which the patient was known to have refused drug treatment in the month before death, 12% of the total sample. The key characteristics of these patients are given in Table 9. A third also missed their final appointment with services.

Patients who refused treatment had a higher rate of previous drug misuse compared to the total sample. More had been re-admitted. The most common reason for treatment refusal was thought by staff to be patients' lack of insight into their mental ill health and need for medication (22 cases, 45%); in 10 cases (20%) the reason for treatment refusal was dependence (e.g. persistent benzodiazepine use against medical advice). Seven (14%) cases who refused treatment were reported to have distressing side-effects of medication. In the month before death, a face-to-face attempt to encourage the patient to take their medication took place in 35 (78%) cases. Respondents did not view these suicides as more or less preventable (10%).

3.6.2 Missed contact

There were 129 suicides by people who missed their final service contact, 27% of the total sample. Their key characteristics are shown in Table 10. Almost 1 in 5 also refused drug treatment in the month before death.

These patients were younger and were more likely to be unmarried and living alone. They were more likely to have a primary diagnosis of alcohol dependence or personality disorder, and less likely to have affective disorder. They were also more likely to have a co-morbid psychiatric diagnosis and to have been ill for longer than 12 months. Patients who had missed their final contact had higher rates of alcohol misuse, drug misuse, and self-harm. Long-term risk was more often viewed as moderate or high (53%). Services had made a recent assertive attempt to re-engage the patient in 55 cases (48%), of whom 13 (24%) received a home visit. Ten percent of the suicides in the missed contact group were thought to have been preventable by services. The factors that, according to respondents, could have reduced risk were most commonly better treatment compliance (59 cases, 48%) and closer contact with the patient's family (18 cases, 16%).

Table 9: Social and clinical characteristics of patient suicides who refused treatment

	Number (56)	%	(95% CI)
Demographic features			
Age: median (range)	38 (19-82)	-	
Male	39	70	(56-81)
Black & minority ethnic groups	2	4	(0-12)
Not currently married	45	82	(69-91)
Unemployed	23	43	(30-58)
Long-term sick	15	28	(17-42)
Living alone	25	46	(33-60)
Homeless	1	2	(0-10)
Priority groups			
In-patients	2	4	(0-12)
Post-discharge patients	11	20	(11-34)
Missed last contact	19	35	(23-49)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	14	25	(14-38)
Affective disorder (bipolar disorder & depression)	20	36	(23-50)
Alcohol dependence	11	20	(10-32)
Drug dependence	0	-	
Personality disorder	8	14	(6-26)
Any secondary diagnosis	36	64	(50-77)
Duration of mental illness (under 12 months)	5	9	(3-20)
Over 5 previous admissions	13	23	(13-36)
Last admission was a re-admission	14	36	(21-53)

Table 9: Social and clinical characteristics of patient suicides who refused treatment (continued)

	Number (56)	%	(95% CI)
Behavioural features			
History of self-harm	43	78	(65-88)
History of violence	16	29	(18-43)
History of alcohol misuse	35	63	(49-75)
History of drug misuse	30	56	(41-69)
Contact with services			
Last contact within 7 days of death	21	38	(25-51)
Symptoms at last contact	40	71	(58-83)
Estimate of immediate risk: low or none	49	91	(80-97)
Estimate of long-term risk: low or none	30	54	(40-67)
Suicide thought to be preventable	5	10	(3-21)

Table 10: Social and clinical characteristics of patient suicides who had missed their last appointment with services

	Number (129)	%	(95% CI)
Demographic features			
Age: median (range)	38 (17-69)	-	
Male	91	71	(62-78)
Black & minority ethnic groups	2	2	(0-5)
Not currently married	102	81	(73-87)
Unemployed	54	46	(37-55)
Long-term sick	28	24	(16-32)
Living alone	60	51	(41-60)
Homeless	2	2	(0-6)
Priority groups			
Post-discharge patients	23	18	(12-26)
Treatment refusal in last month	19	18	(11-27)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	15	12	(7-18)
Affective disorder (bipolar disorder & depression)	32	25	(18-33)
Alcohol dependence	33	26	(18-34)
Drug dependence	6	5	(2-10)
Personality disorder	21	16	(10-24)
Any secondary diagnosis	89	69	(60-77)
Duration of mental illness (under 12 months)	12	9	(5-16)
Over 5 previous admissions	19	15	(9-22)
Last admission was a re-admission	14	16	(9-25)

Table 10: Social and clinical characteristics of patient suicides who had missed their last appointment with services (continued)

	Number (129)	%	(95% CI)
Behavioural features			
History of self-harm	101	80	(71-86)
History of violence	28	23	(16-31)
History of alcohol misuse	95	75	(66-82)
History of drug misuse	56	46	(37-55)
Contact with services			
Last contact within 7 days of death	22	17	(11-25)
Symptoms at last contact	80	65	(55-73)
Estimate of immediate risk: low or none	108	91	(84-95)
Estimate of long-term risk: low or none	56	47	(38-56)
Suicide thought to be preventable	11	10	(5-17)

3.7 ALCOHOL AND DRUG DEPENDENCE AND MISUSE

Alcohol and drug misuse were common in patient suicides overall and in the sub-groups described here. For example, 60% of patients who died were known to have misused alcohol, 34% drugs and 29% both. In this section, patients with a primary diagnosis of alcohol or drug dependence (not misuse), and those with "dual diagnosis", are described in more detail.

3.7.1 Alcohol and drug dependence

Ninety-one (17%) patients had a primary diagnosis of alcohol dependence. Twenty-four (5%) patients had a primary diagnosis of drug dependence. The characteristics of these individuals are shown in Tables 11 and 12.

Patients with alcohol or drug dependence were more likely to be male. Most were unemployed. The majority were not in contact with specialist addiction services (64% and 67% respectively). They were less likely to have been in recent contact with mental health services in the seven days before they died.

Patients with alcohol dependence were more likely (than all other patients who died by suicide) to be living alone. They were less likely to have a short history of illness, proportionally more had a secondary diagnosis and more had missed their final appointment with services. The rate of previous violence was higher.

Patients with drug dependence were younger (than all other patients). They were more likely to have discharged themselves from their final admission (7 cases, 47% v. 68 cases, 21%). Fewer patients with alcohol or drug dependence had a follow-up appointment with services (44 cases, 83% and 9 cases, 64% respectively, compared to over 90% of the total sample).

Table 11: Social and clinical characteristics of patient suicides with a primary diagnosis of alcohol dependence

	Number (91)	%	(95% CI)
Demographic features			
Age: median (range)	41 (19-69)	-	
Male	75	82	(73-90)
Black & minority ethnic groups	0	-	
Not currently married	72	80	(70-88)
Unemployed	45	53	(42-64)
Long-term sick	18	21	(13-31)
Living alone	48	55	(44-66)
Homeless	1	1	(0-6)
Priority groups			
In-patients	1	1	(0-6)
Post-discharge patients	18	20	(12-30)
Missed last contact	33	38	(27-48)
Treatment refusal in last month	11	14	(7-24)
Clinical features			
Any secondary diagnosis	63	69	(59-78)
Duration of mental illness (under 12 months)	5	6	(2-13)
Over 5 previous admissions	10	11	(5-19)
Last admission was a re-admission	10	18	(9-31)

Table 11: Social and clinical characteristics of patient suicides with a primary diagnosis of alcohol dependence (continued)

	Number (91)	%	(95% CI)
Behavioural features			
History of self-harm	68	76	(65-84)
History of violence	30	35	(25-46)
History of drug misuse	39	44	(34-55)
Contact with services			
Last contact within 7 days of death	22	24	(16-34)
Symptoms at last contact	58	66	(55-76)
Estimate of immediate risk: low or none	76	93	(85-97)
Estimate of long-term risk: low or none	46	55	(44-66)
Suicide thought to be preventable	6	7	(3-15)

Table 12: Social and clinical characteristics of patient suicides with a primary diagnosis of drug dependence

	Number (24)	%	(95% CI)
Demographic features			
Age: median (range)	29 (17-49)	-	
Male	22	92	(73-99)
Black & minority ethnic groups	0	-	
Not currently married	22	92	(73-99)
Unemployed	14	58	(37-78)
Long-term sick	3	13	(3-32)
Living alone	10	45	(24-68)
Homeless	0	-	
Priority groups			
In-patients	0	-	
Post-discharge patients	7	29	(13-51)
Missed last contact	6	27	(11-50)
Treatment refusal in last month	0	-	
Clinical features			
Any secondary diagnosis	12	50	(29-71)
Duration of mental illness (under 12 months)	2	8	(1-27)
Over 5 previous admissions	2	8	(1-27)
Last admission was a re-admission	1	7	(0-32)

Table 12: Social and clinical characteristics of patient suicides with a primary diagnosis of drug dependence (continued)

	Number (24)	%	(95% CI)
Behavioural features			
History of self-harm	14	61	(39-80)
History of violence	6	27	(11-50)
History of alcohol misuse	18	75	(53-90)
Contact with services			
Last contact within 7 days of death	3	13	(3-32)
Symptoms at last contact	18	78	(56-93)
Estimate of immediate risk: low or none	20	91	(71-99)
Estimate of long-term risk: low or none	14	64	(41-83)
Suicide thought to be preventable	2	11	(1-33)

3.7.2 Dual diagnosis

There were 131 suicides by people with severe mental illness (schizophrenia or affective disorder) and alcohol or drug dependence/ misuse, 25% of the total sample (Table 13). Of these, 118 (90%) had a history of alcohol misuse, 56 (45%) had a history of drug misuse, and 44 (35%) had a history of both.

These "dual diagnosis" patients were mainly male and more likely to be on long-term sick leave. They were less likely to have been admitted for under a week in their last admission (23% v. 35%). A greater proportion died within three months of discharge (33% v. 23%). Dual diagnosis patients were more likely to have had a care-coordinator allocated (41% v. 24%) and to have had a follow-up appointment arranged (98% v. 90%). Long-term risk was more often viewed as moderate or high (52% v. 41%).

Table 13: Social and clinical characteristics of patient suicides with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)

	Number (131)	%	(95% CI)
Demographic features			
Age: median (range)	39 (16-79)	-	
Male	103	79	(71-85)
Black & minority ethnic groups	2	2	(0-5)
Not currently married	96	74	(65-81)
Unemployed	43	34	(26-43)
Long-term sick	36	29	(21-37)
Living alone	48	38	(29-47)
Homeless	1	1	(0-4)
Priority groups			
In-patients	11	8	(4-15)
Post-discharge patients	39	33	(24-42)
Missed last contact	32	27	(19-36)
Treatment refusal in last month	19	16	(10-24)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	46	35	(27-44)
Affective disorders (bipolar disorder & depression)	85	65	(56-73)
Duration of mental illness (under 12 months)	26	20	(14-28)
Over 5 previous admissions	30	23	(16-31)
Last admission was a re-admission	19	21	(13-30)

Table 13: Social and clinical characteristics of patient suicides with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse) (continued)

	Number (131)	%	(95% CI)
Behavioural features			
History of self-harm	98	76	(68-83)
History of violence	26	20	(14-28)
History of alcohol misuse	118	90	(84-95)
History of drug misuse	56	45	(36-54)
Contact with services			
Last contact within 7 days of death	58	44	(36-53)
Symptoms at last contact	77	61	(52-70)
Estimate of immediate risk: low or none	110	91	(84-95)
Estimate of long-term risk: low or none	58	48	(39-57)
Suicide thought to be preventable	12	10	(5-17)

3.8 HOW MANY SUICIDES COULD HAVE BEEN PREVENTED?

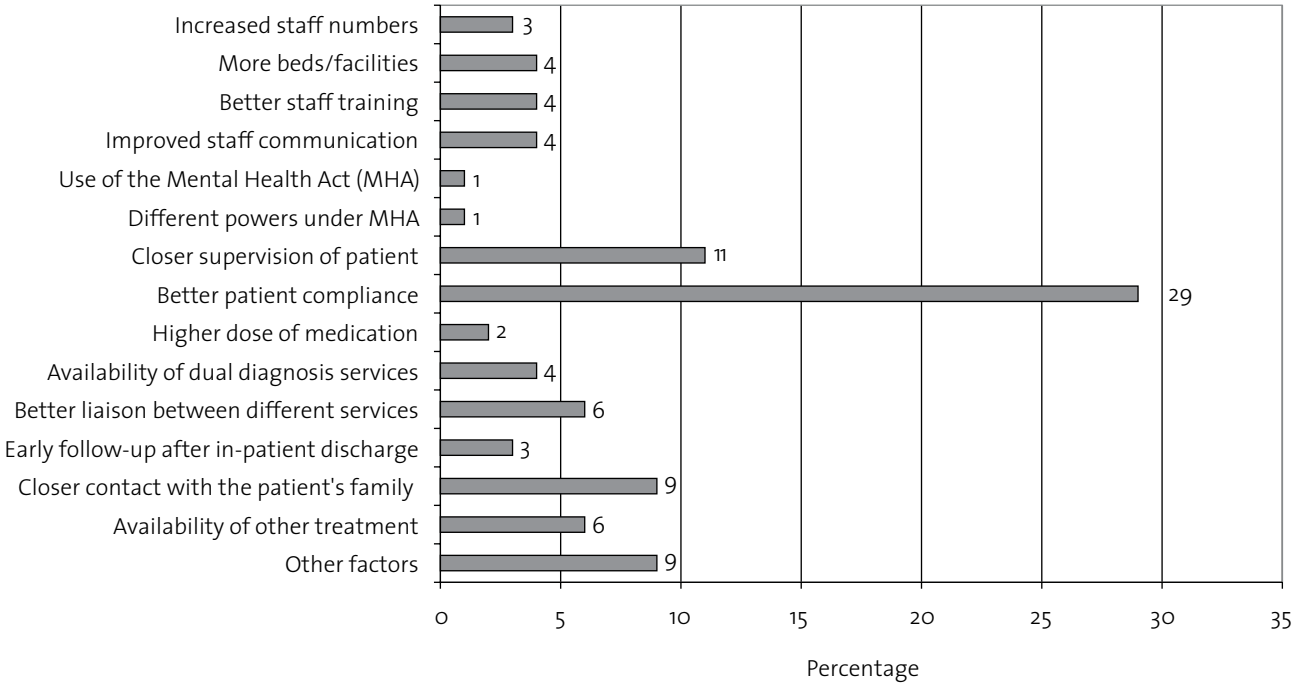
3.8.1 Clinicians' views

In 44 cases (9%), the respondent believed that the suicide could have been prevented. For priority groups the figures were: in-patients, 7 cases (21%); post-discharge, 12 cases (10%); missed last contact, 11 cases (10%); refused treatment in last month, 5 cases (10%).

Overall, patient suicides perceived as preventable were more likely to be married (23 cases, 52%) and to have been in-patients at the time of death (7 cases, 16%). Irrespective of whether they were in hospital or in the community, they were more likely to have detectable symptoms at final contact (37 cases, 84%) and more often thought to be at moderate or high immediate risk at final contact (10 cases, 23%).

In 271 (53%) patients, respondents suggested factors that could have made the suicide less likely (Figure 17). The most frequent suggestions were better treatment compliance, closer patient supervision, and closer contact with the patient's family.

Figure 17: Mental health teams' views on factors that could have reduced the likelihood of suicide



3.8.2 "Most preventable" suicides

The most preventable deaths among the patient sample are likely to be those who died in close proximity to services, especially those whose risk was evident but who did not receive care that matched their risk. We are not presenting these cases as the only cases in which risk management may be strengthened. However, they represent the cases in which specific problems of care may be evident, and which could therefore be a priority for future prevention.

We can estimate the size of a "most preventable" group consisting of patients who were in-patients or who were in the post-discharge period. These include: (1) in-patients who died by suicide within the first week of admission and who had been detained under the MHA or who had absconded from the ward; (2) high risk informal in-patients who died by suicide within the first week of admission - high risk here means severe mental illness (schizophrenia or affective disorder) or recent (within 3 months) self-harm; (3) high risk in-patients who lived alone and died by suicide later in their admission after being given home leave; (4) in-patients who died by suicide while under close observation; and (5) post-discharge patients who died by suicide before their first follow-up.

Putting these groups together gives 41 "most preventable" cases, 5 per year, 8% of all patient suicides.

3.9 TRENDS 1998-2008

3.9.1 Patient suicides

The number of patient suicides increased but, as a proportion of all suicides, they did not increase. The number (but not the proportion) of suicides by hanging increased (Figure 18).

Despite year on year fluctuations, the number (but not the proportion) of patients with alcohol misuse increased from 1998, whilst the number and proportion with drug misuse remained stable (Figure 19).

Figure 18: Patient suicide: number of deaths by hanging (1998-2008)

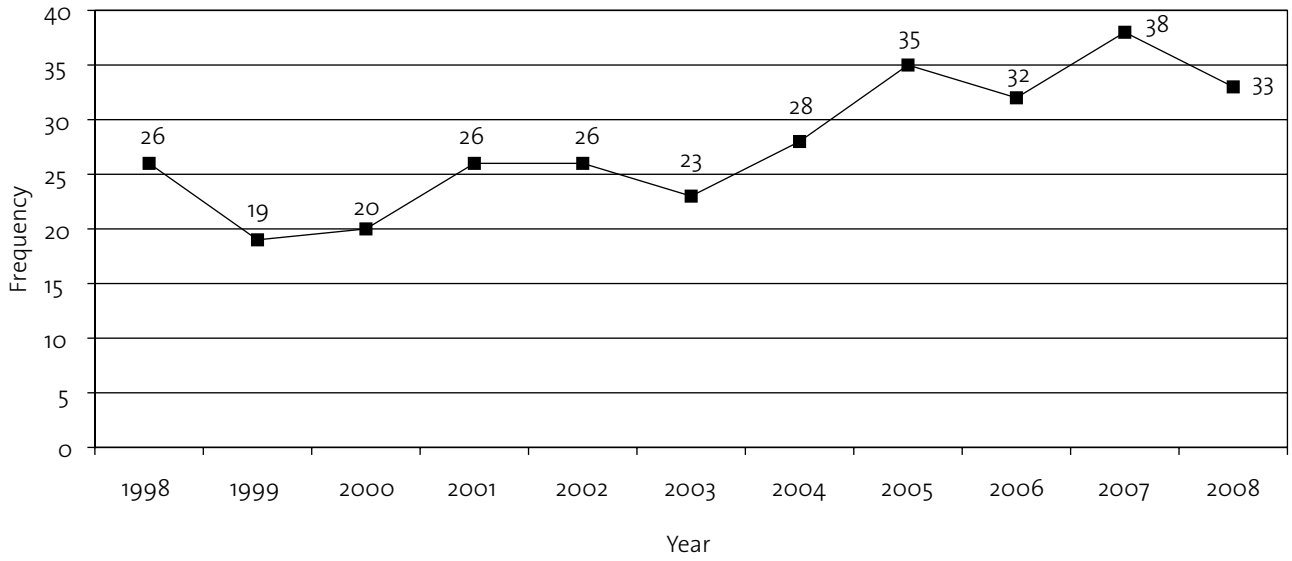
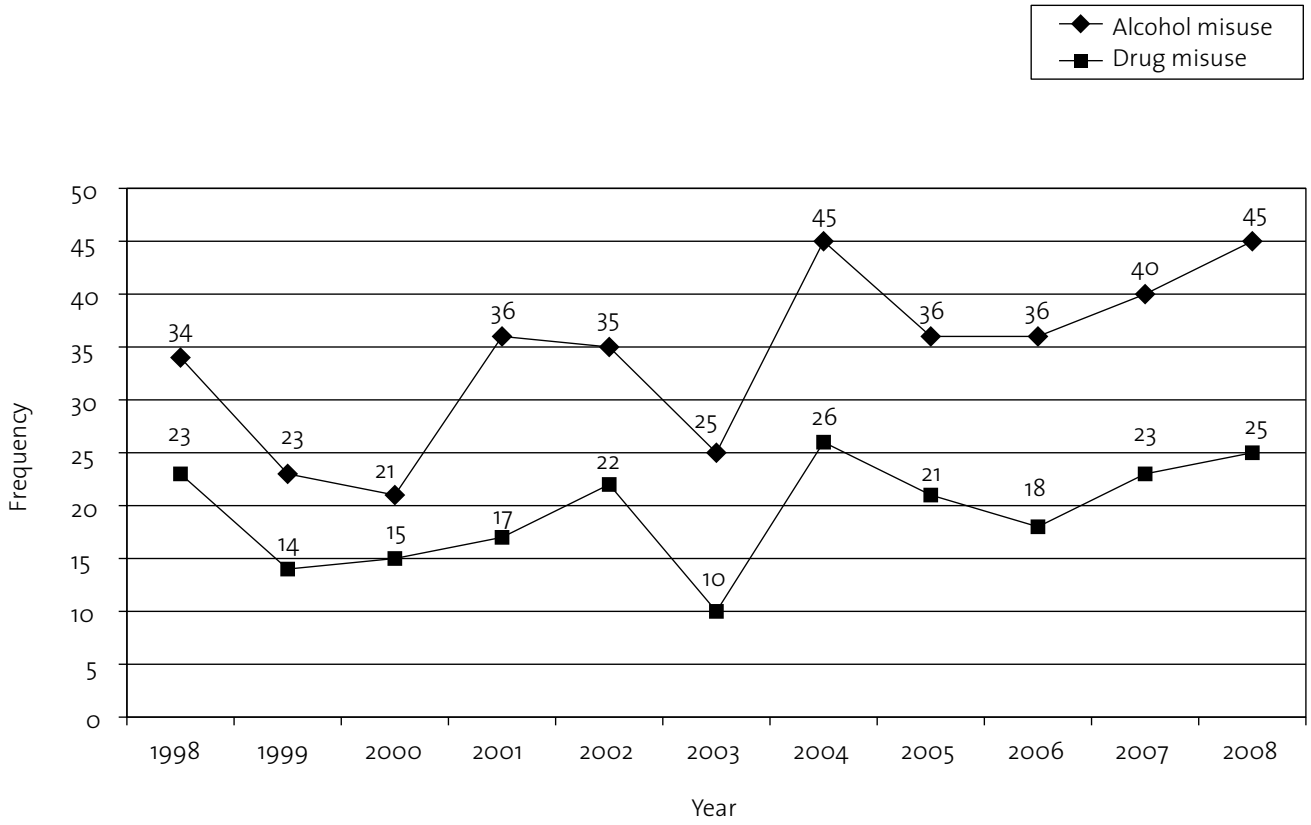


Figure 19: Patient suicide: number of patients with a history of alcohol and drug misuse (1998-2008)



3.9.2 In-patients

Numbers were small but from 1998-2008 the number of in-patient suicides appeared to fall (Table 14). For example, there were 34 in-patient suicides in the first 5 years (1998-2002) of the report period and 15 in the last 6 years (2003-2008). As a proportion of all patient suicides, in-patient suicides fell from 20% in 1999 to 3% in 2008.

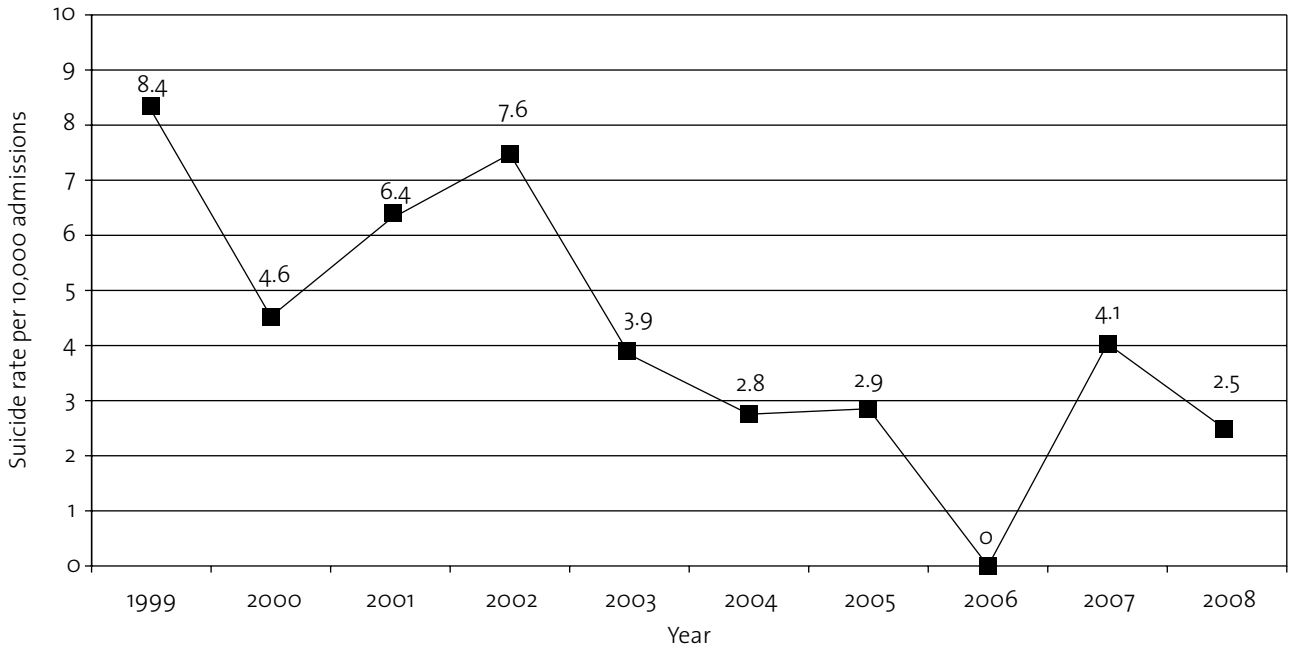
Using denominator data for available years (1999-2008) (15), the average annual in-patient suicide rate was 4.3 per 10,000 mental health admissions and the rate fell over time (Figure 20). This compares to an average annual rate in England (2004-2007) of 10.1 per 10,000 admissions, and 7.1 per 10,000 admissions in Scotland (2000-2005). The difference in rates may be explained by the greater use of in-patient services in Northern Ireland compared to the rest of the UK. (4)

Hanging, although the most common method of suicide, became less frequent after a peak in 1999. Between 1998 and 2002 there were 7 cases of in-patient hanging. After 2002, there were no cases.

Table 14: In-patient suicide: trends over time (1998-2008)

Year	Total number of patient suicides	In-patients number (%)
1998	61	5 (8%)
1999	45	9 (20%)
2000	37	5 (14%)
2001	57	7 (12%)
2002	65	8 (12%)
2003	45	4 (9%)
2004	71	3 (4%)
2005	63	3 (5%)
2006	58	0
2007	72	3 (4%)
2008	63	2 (3%)
Total	637	49 (8%)

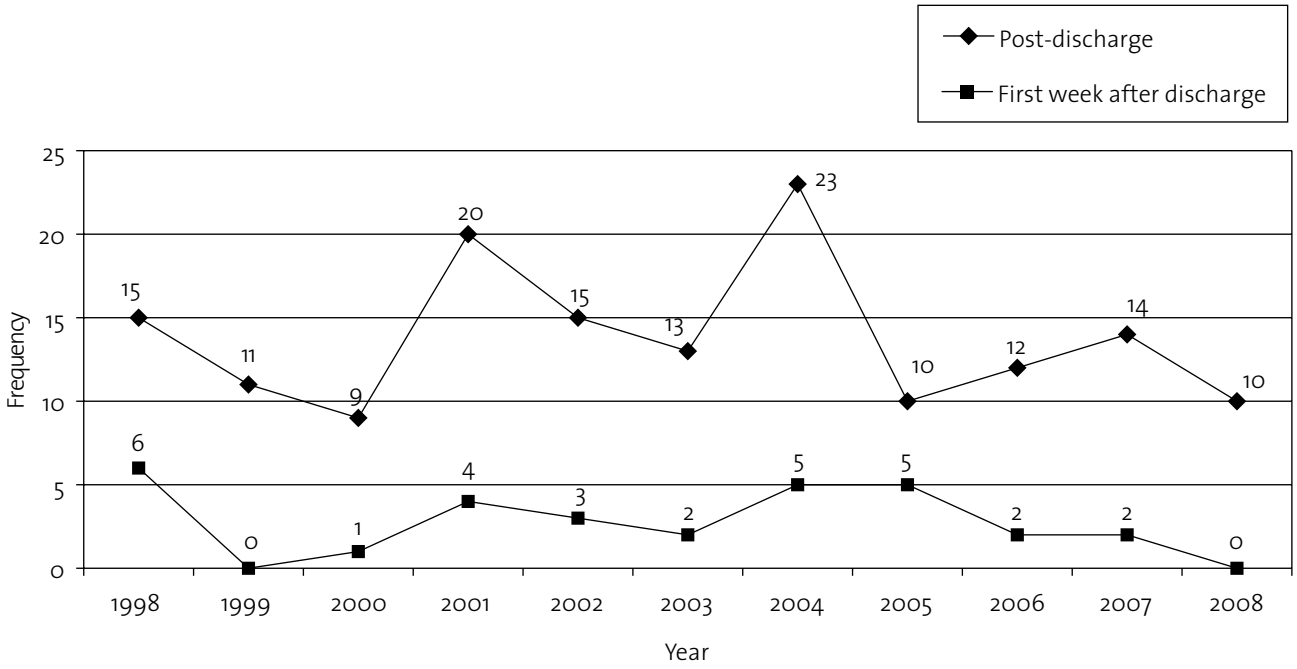
Figure 20: Rate of in-patient suicide per 10,000 mental health admissions (1999-2008)



3.9.3 Other patient groups

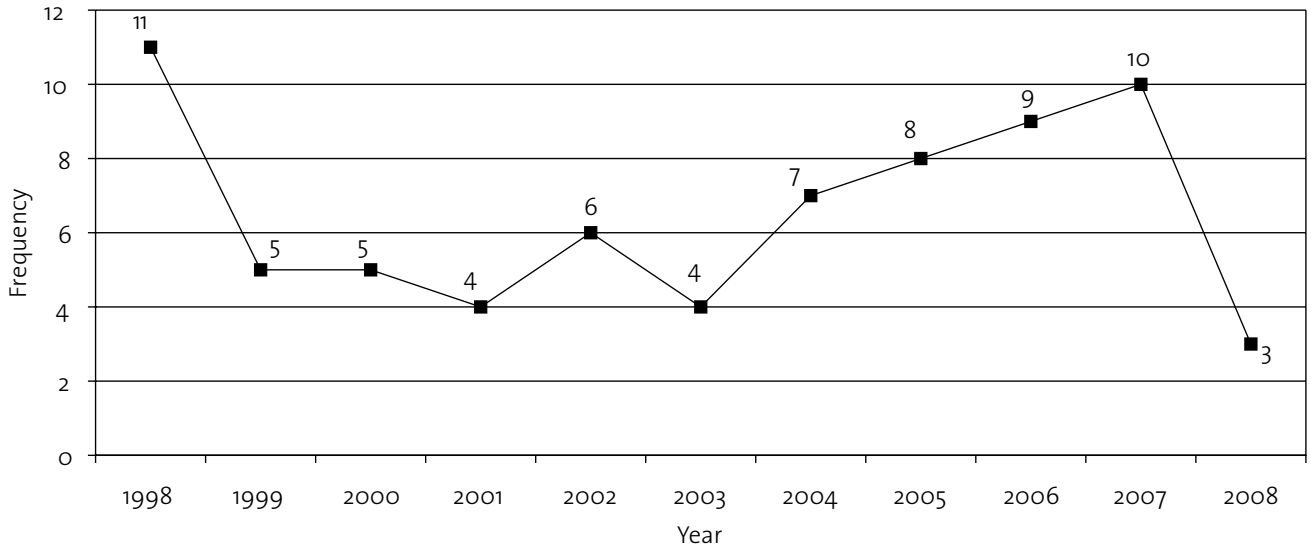
The annual number of post-discharge suicides fluctuated but with no overall trend (Figure 21). The highest number was in 2004 (23 cases) and the lowest in 2000 (9 cases).

Figure 21: Number of post-discharge suicides (1998-2008)



There was no overall trend in the number of patients who refused treatment prior to suicide (Figure 22). Numbers were small, and the increase between 2003 and 2007 was not significant. The drop in numbers in 2008 cannot be interpreted at this stage.

Figure 22: Number of patient suicides who had refused treatment (1998-2008)



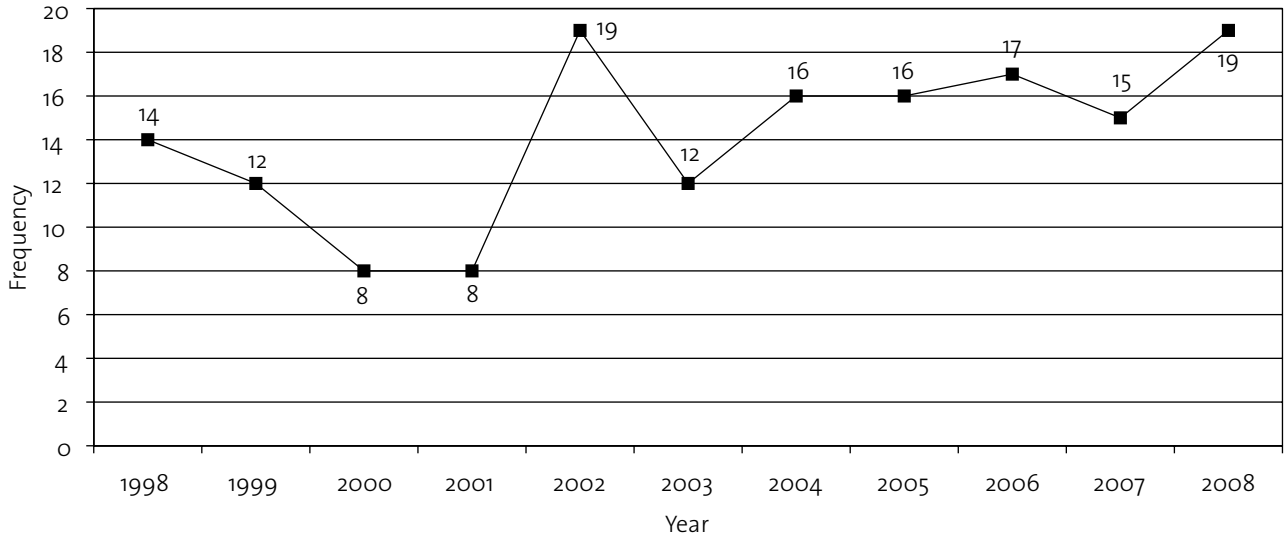
Since 1998 a total of 156 patients who died by suicide missed their last appointment. There was no overall trend in the number of these suicides over the study period (Figure 23), although there was an increase from 2000 onwards.

3.9.4 Comparisons with *Safety First*

We published information about patient suicides in Northern Ireland in our 2001 report *Safety First*, covering the period 1997 to 1999. Compared to *Safety First*, this report has found:

- fewer patients who refused treatment prior to suicide (12% v. 21%)
- fewer patients whose long-term risk was viewed as moderate or high (44% v. 60%)
- fewer suicides that were viewed by staff as preventable (9% v. 19%)
- although the proportion of in-patient deaths is lower than in our previous report (7% v. 10%), this is not significantly different
- 24% of post-discharge deaths occurred before follow-up, a decrease from 66%.

Figure 23: Number of patient suicides who missed their last appointment (1998-2008)



3.10 SUMMARY AND COMMENT

The number of patient suicides increased from 1998 to 2008, in line with the rise in general population suicide. As a proportion of all cases, patient suicides were stable at around 29%. The use of hanging increased in patient suicides, as in the general population.

Alcohol and drug misuse were common. Alcohol misuse appeared to become a more frequent feature of patient suicides during the report period. Patients with alcohol or drug dependence showed multiple clinical and social indicators of risk. Dual diagnosis (severe mental illness and alcohol or drug misuse) was found in a quarter of patient suicides.

Missed final contact with services was a more frequent antecedent to suicide than treatment refusal, and appeared to increase. Clinicians highlighted measures to tackle treatment refusal as the most likely to have reduced risk in their cases.

The majority of patients were regarded as low risk, even though 41% were seen within a week of suicide. Long-term risk was judged to be higher than short-term risk; judgements of long-term risk were more closely associated with clinical history and background social factors. Only 9% of patient suicides were thought by clinicians to be preventable, although the figure was higher for in-patient suicides.

Suicides clustered immediately after discharge from in-patient care. These deaths were associated with a pattern of re-admission.

The number of in-patient deaths fell during the study period, although small numbers and fluctuations made it hard to identify a definite trend. Most in-patient suicides occurred when the patient was off the ward with staff agreement or on leave. Hanging was the most common method of suicide among in-patients overall but no hanging deaths were reported after 2002.

The characteristics of patients who died by suicide varied according to age and diagnosis with implications for prevention. For example, substance misuse, co-morbidity and previous self-harm were more often features of young patients, and those with schizophrenia or personality disorder. Depression and recent onset of illness were more often features of suicide in older patients.

Comparisons with other UK countries are presented in section 3.11.

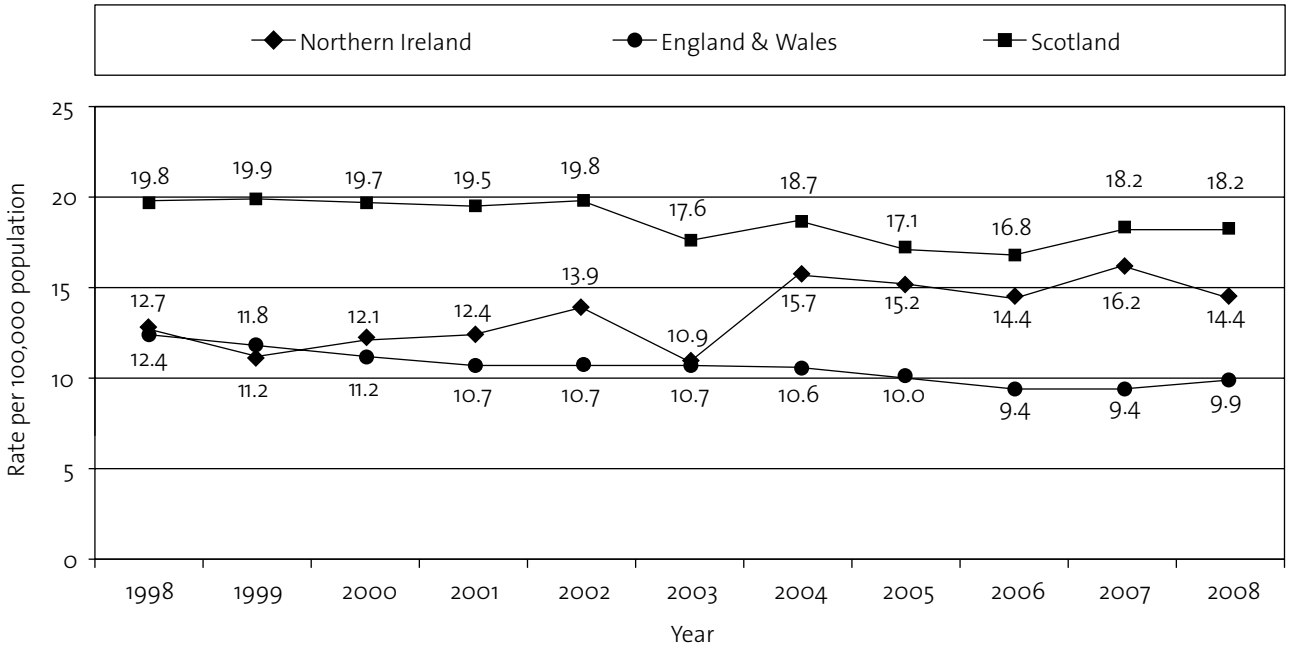
3.11 UK COMPARISONS

Comparisons between general population and patient suicides in Northern Ireland and in the England and Wales report *Avoidable Deaths* (12) and in the Scottish report *Lessons for Mental Health Care in Scotland* (11) are described below.

3.11.1 General population suicide rates

Comparisons between suicide rates are shown in Figure 24. The rate in Northern Ireland is higher than in England and Wales but lower than in Scotland. In Northern Ireland the rate is not falling, in contrast to the rest of the UK.

Figure 24: General population suicide: rates per 100,000 population in the UK



3.11.2 Age profile and method

Comparisons between age-related suicide rates in the UK countries are shown in Figure 25. The comparatively high rate in Northern Ireland is greatest in the youngest age-groups but is evident at all ages up to those over 70, when it becomes the lowest UK rate. Similarly, the proportion of people dying by suicide in the general population aged under 25 has been higher in Northern Ireland (Table 15), although since 2005 the rate for 15 to 24 year-olds is similar to the rate in Scotland (Figure 26), and the rate in young people (under 18) is also higher in Northern Ireland and Scotland (Table 15).

Several differences in method of suicide are found between UK countries. In Northern Ireland, suicides are more likely to occur by hanging and firearms (Table 16).

Figure 25: General population suicide: 5-year age-group rates in the UK

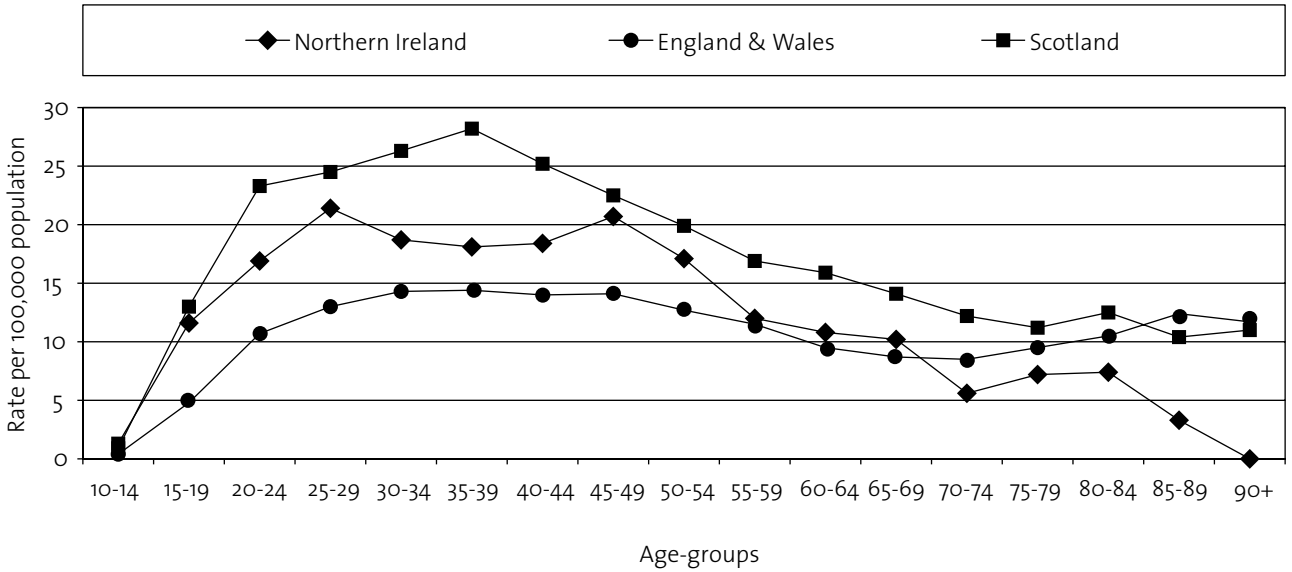


Figure 26: General population suicide: rates in those aged 15-24 in the UK (1998-2008)

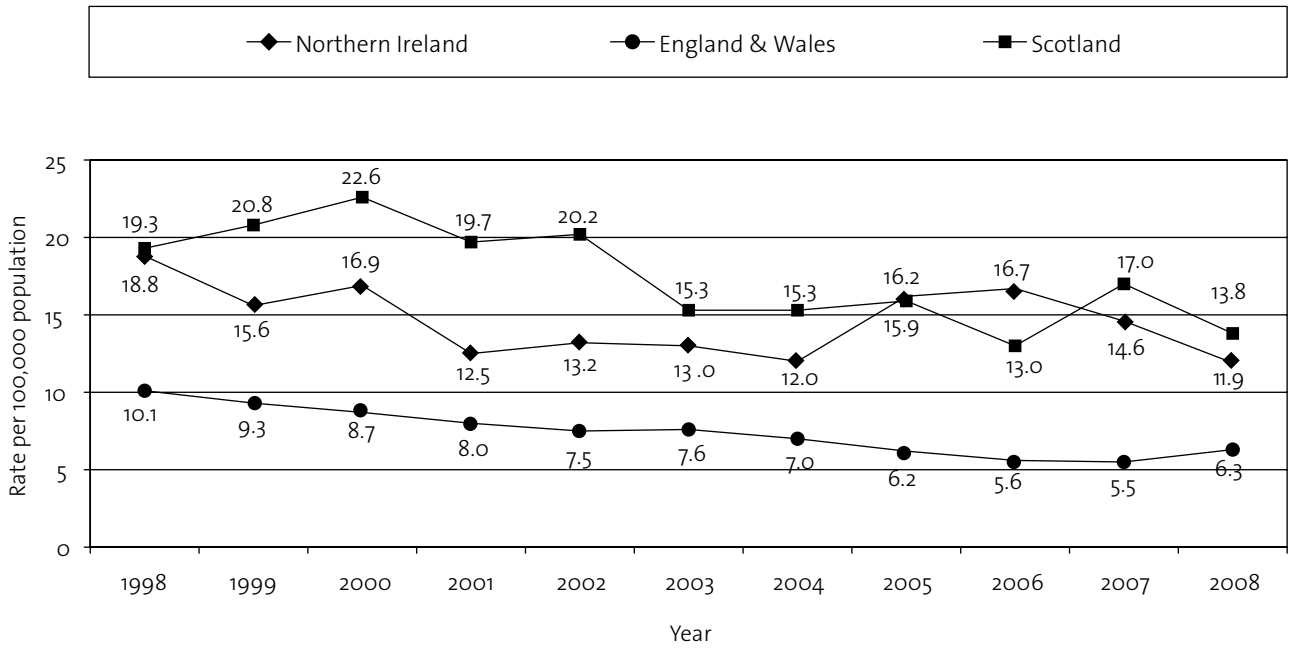


Table 15: General population suicide: comparisons in the UK

Feature	Northern Ireland % (2000-2008)	England and Wales % (2000-2004)	Scotland % (2000-2005)
Rate per 100,000 population	13.9	10.2*	18.7*
Rate in those aged under 18	4.2	1.4*	5.2
Suicide verdict	87	70*	71*
In contact with services	29	27	28
Aged under 25	18	10*	14*
Aged 65 and over	8	16*	12*

Table 16: General population suicide: method of suicide comparisons in the UK

Method	Northern Ireland %	England and Wales %	Scotland %
Hanging/strangulation	55	39*	35*
Self-poisoning	22	26*	31*
Firearms	5	2*	1*
Jumping/multiple injuries	2	10*	10*
Drowning	9	5*	10
Carbon monoxide poisoning	3	6*	4

Table 17: Patient suicide: method of suicide comparisons in the UK

Method	Northern Ireland %	England and Wales %	Scotland %
Hanging/strangulation	49	37*	36*
Self-poisoning	29	28	34
Firearms	2	1*	<1*
Jumping/multiple injuries	2	15*	11*
Drowning	12	6*	10
Carbon monoxide poisoning	2	5*	3

*denotes a significant difference from Northern Ireland

3.11.3 Patient characteristics

Comparisons between patient suicides in Northern Ireland, England and Wales, and Scotland are shown in Tables 17 (suicide method) and 18 (clinical and demographic characteristics).

Patient suicides in Northern Ireland were more likely to occur by hanging or firearms (although firearm deaths were uncommon in all countries) but less likely to die by jumping. In Northern Ireland, a greater proportion were male. Alcohol dependence and misuse were more common in Northern Ireland and Scotland than in England and Wales (Figures 27 and 28).

Figure 27: Patient suicide: proportion with alcohol misuse/dependence in the UK

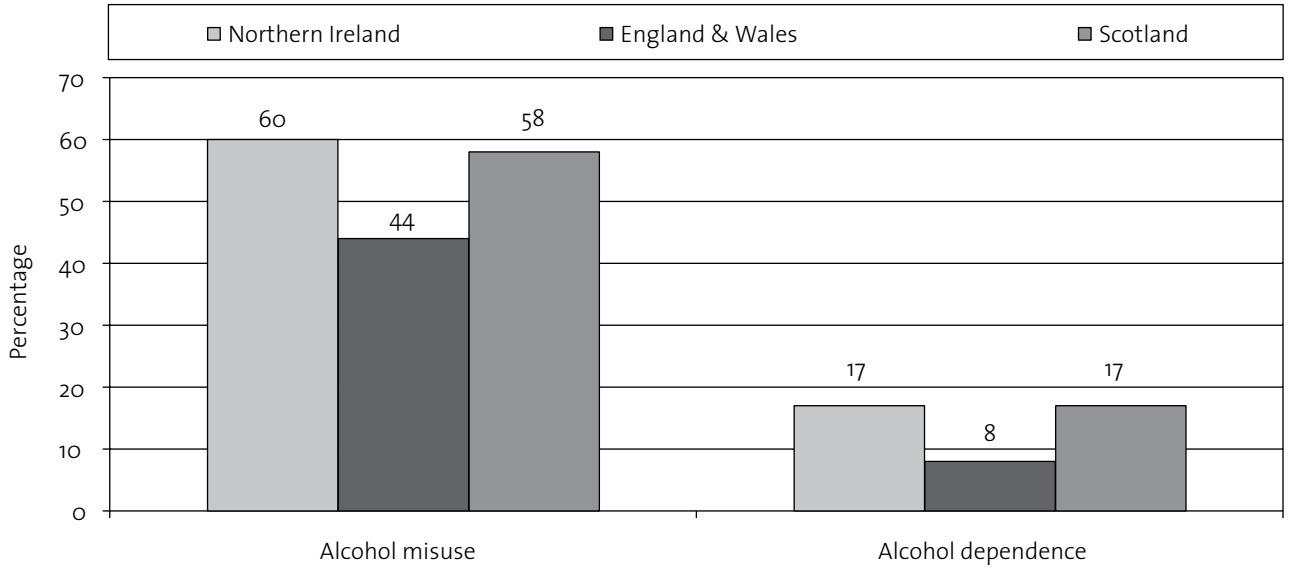


Table 18: Patient suicide characteristics: comparisons in the UK

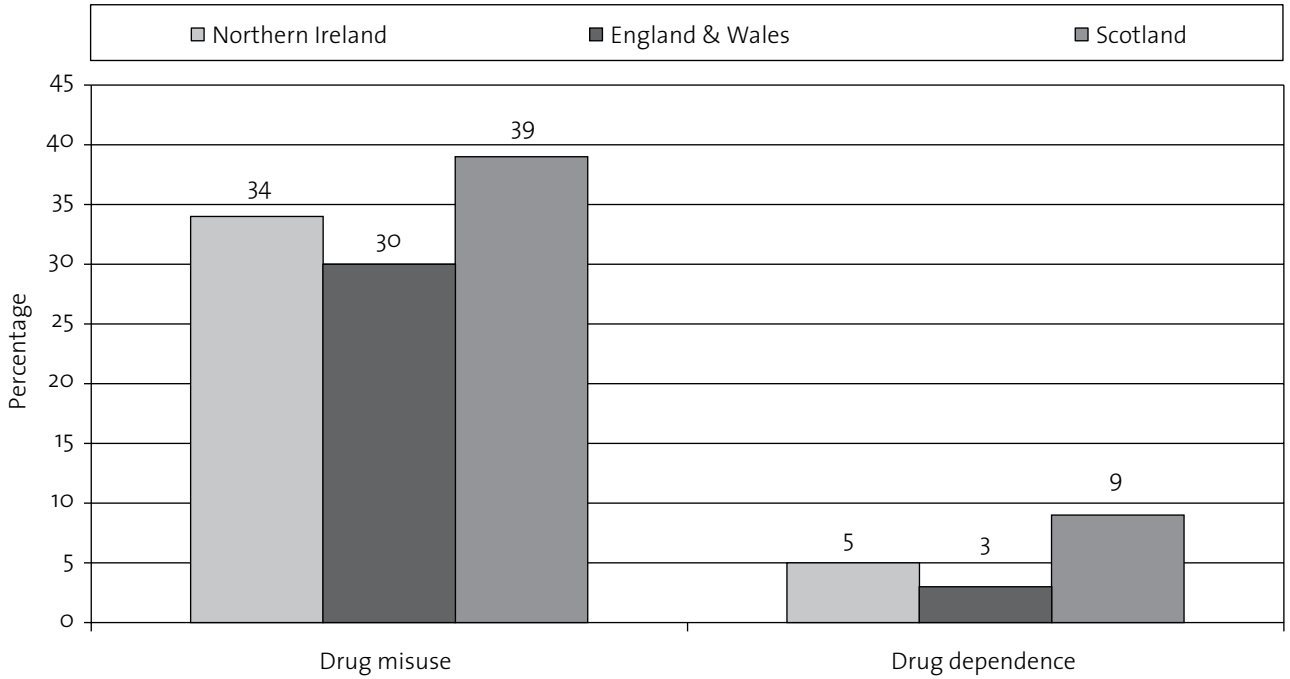
	Northern Ireland %	England and Wales %	Scotland %
Demographic features			
Male	71	66*	65*
Aged 65 and over	9	13*	10
Unemployed	39	40	46*
Long-term sick	22	18*	18*
Living alone	41	44	48*
Homeless	1	2	3*
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	15	19	15
Affective disorder (bipolar disorder & depression)	36	46*	32
Alcohol dependence	17	8*	17
Drug dependence	5	3	9*
Personality disorder	10	8	9
Any secondary diagnosis	58	54	52*
Dual diagnosis	25	27	25
Prority groups			
In-patients	7	14*	9
Post-discharge patients	25	24	22
Missed last contact	27	29	31
Treatment refusal in last month	12	14	13
Behavioural features			
History of self-harm	71	68	69
History of violence	21	22	23
History of alcohol misuse	60	44*	58
History of drug misuse	34	30*	39

*denotes a significant difference from Northern Ireland

3.11.4 Patient care

The proportion of patient suicides in Northern Ireland that occurred in in-patients was lower than in England and Wales, although similar to Scotland. The number of in-patient suicides appears to be falling in all countries. The proportion who died within 3 months of discharge from in-patient care was similar to the rest of the UK, and has not fallen. Post-discharge suicides in Northern Ireland more often had a history of alcohol misuse than those in England and Wales (66% v. 47%). Those who refused treatment in Northern Ireland were more likely to be alcohol dependent than in England and Wales (20% and 6% respectively). A similar proportion of patients in Northern Ireland died following missed contact with services as in the rest of the UK. The proportion of patient suicides in Northern Ireland who were misusing both alcohol and drugs was greater than in England and Wales (29% v. 21%), although similar to Scotland.

Figure 28: Patient suicide: proportion with drug misuse/dependence in the UK



4. HOMICIDE

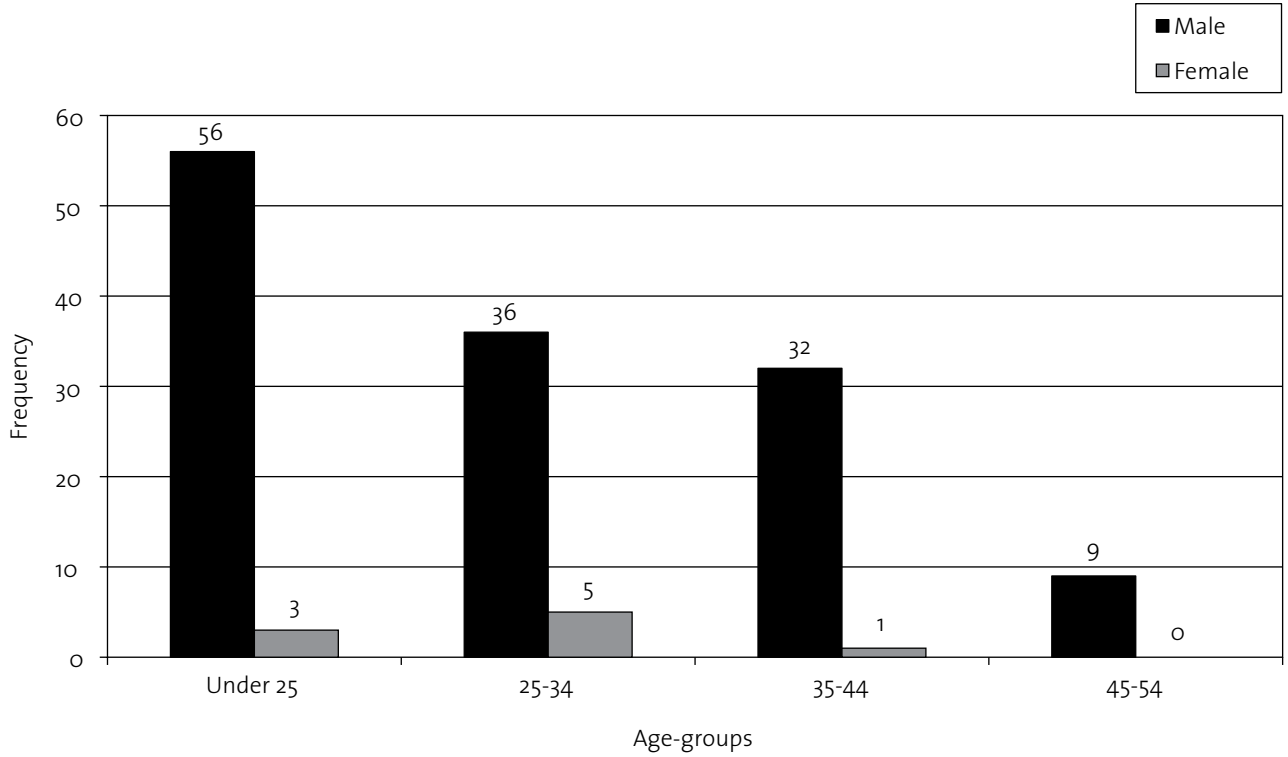
4.1 HOMICIDE IN THE GENERAL POPULATION

4.1.1 Numbers and rates

The Inquiry was notified of 142 homicide convictions occurring between January 2000 and December 2008. There were 65 cases of murder, 76 of manslaughter and 1 of infanticide.

This is an average of 16 homicides per year; the equivalent rate is 10.6 per million population per year. These figures may under-estimate the true number and rate of homicide. There is no central record of homicide convictions in Northern Ireland; cases are notified to us by the Northern Ireland Court Service but completeness of notification cannot be checked. See section 2.4.2 for more detail on notification. For this reason this section concentrates on characteristics of the aggregated cases, rather than time trends.

Figure 29: General population homicide: age and sex of perpetrators



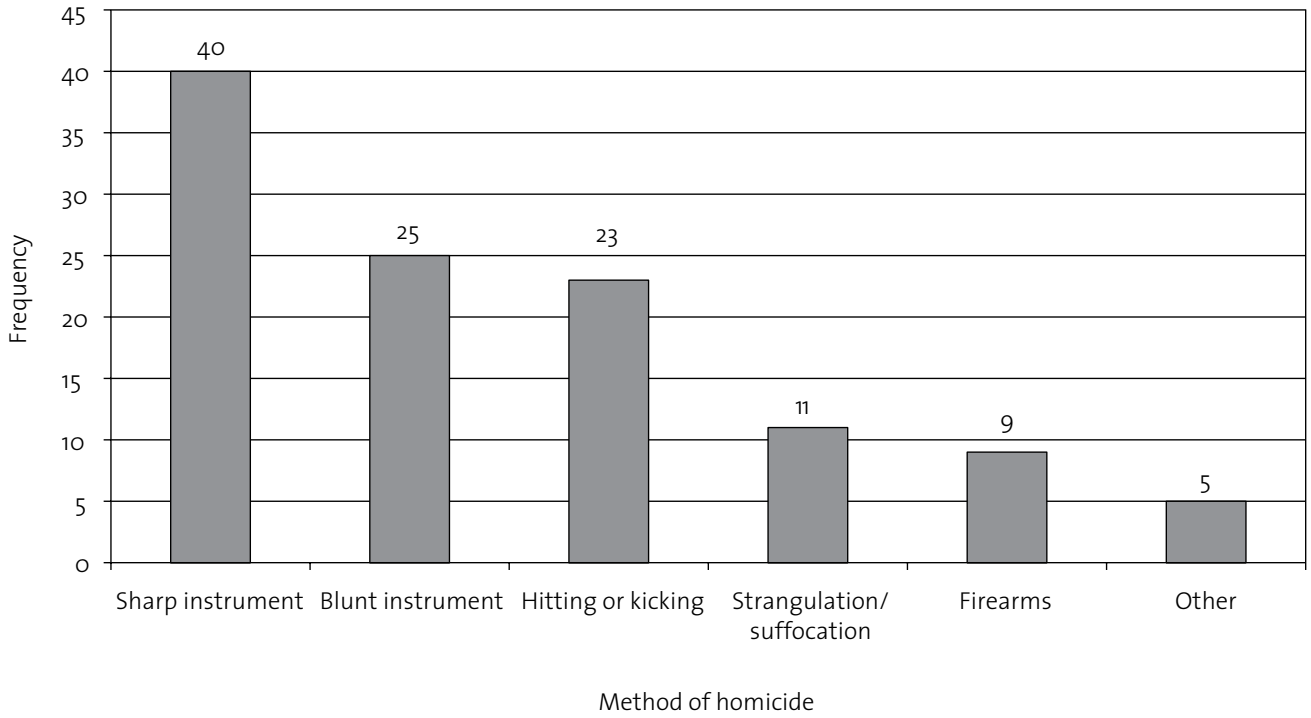
4.1.2 Characteristics of perpetrators

One hundred and thirty-three (94%) perpetrators were male, giving a male to female ratio of 15:1. Most perpetrators were young, with a median age of 27 years, their ages ranging from 14-52 years (Figure 29).

4.1.3 Method of homicide

The most common method of homicide was the use of a sharp instrument (40 cases, 35%) (Figure 30). This category generally refers to the use of knives, but the exact weapon in these cases is not recorded. Firearms were used in 9 cases (8%) (Figure 30).

Figure 30: General population homicide: method of homicide

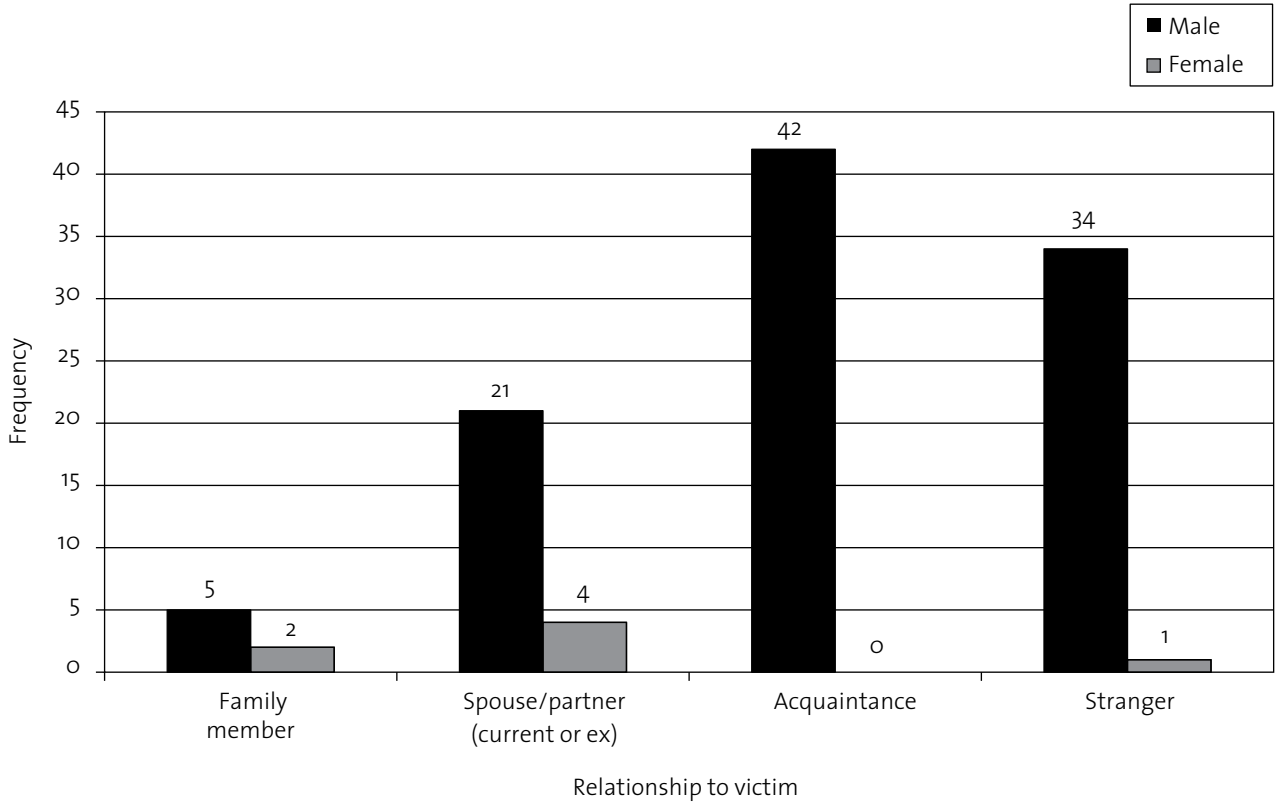


4.1.4 Victims

The majority of victims were male (106 cases, 78%) and their median age was 39 years (range 1 day to 76 years). In 100 cases (74%) a male perpetrator killed a male victim.

In 42 cases (37%) the victim was an acquaintance; in 32 cases (28%) a family member or a current or former spouse/partner, and in 35 cases (31%) a stranger (Figure 31). When women were the perpetrators, the victim was most often a family member, or a current or former spouse/partner (6 cases, 86%). All perpetrators of homicide between acquaintances were male, 39 (93%) of whom killed a male acquaintance. Two thirds (28 cases, 67%) of those who killed an acquaintance had a history of mental illness, 31 (91%) had a history of alcohol misuse, 25 (78%) had a history of drug misuse, and 33 (97%) had a history of alcohol and/or drug misuse.

Figure 31: General population homicide: relationship of victim to perpetrator by sex of perpetrator



4.1.5 Stranger homicides

The victim was unknown to the perpetrator in 35 cases (31%) (Figure 31). The median age of stranger homicide perpetrators was 23 years. Stranger homicides by women were rare (1 case). None of the perpetrators killed more than one victim; therefore there were 35 victims of a stranger homicide over the study period, including 3 that could be classed as "political" homicides. The most common methods of homicide in these cases were hitting and kicking (9 cases, 31%) and the use of a blunt instrument (9 cases, 31%). Those who committed a stranger homicide were less likely to have a history of mental disorder (5 cases, 14% v. 45 cases, 58%). No stranger homicides were committed by people who were mentally ill at the time of the offence.

We previously reported 1 homicide by a stranger in the previous *Safety First* report (1997-2000). There has been an increase in stranger homicide over the latest report period (2000-2008) (1 case, 4% v. 35 cases, 31%; $p<0.01$). This difference is large and unlikely to be explained by differences in reporting.

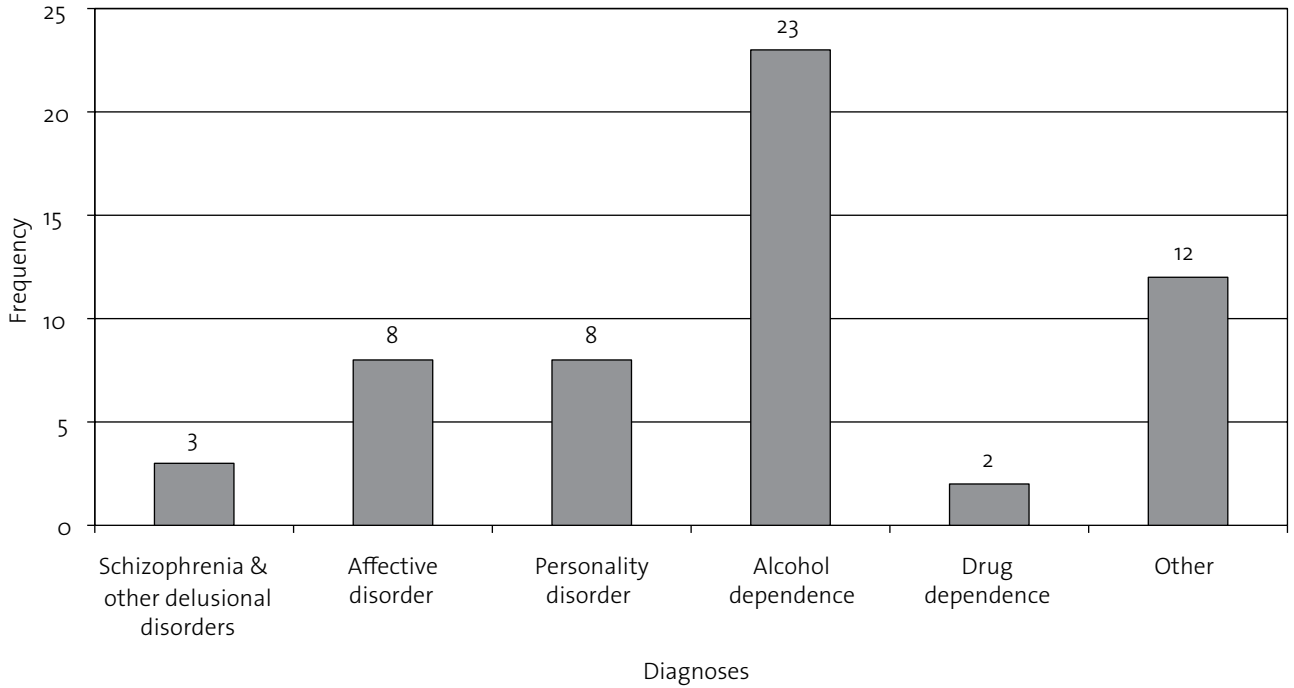
4.1.6 Previous convictions

We obtained information on previous offences for 103 homicides, (73%). Of these, 78 (76%) had previous convictions, and 46 (41%) had a history of violence against the person.

4.1.7 Outcome in court

One hundred and thirty-six (96%) perpetrators received a prison sentence. Three (2%) were committed to psychiatric hospital and 3 (2%) received a non-custodial sentence. Of those sent to prison, 56 (41%) had a history of mental illness and 12 (22%) were mentally ill at the time of the offence. The diagnostic breakdown (from psychiatric reports and services) of those with a history of mental illness receiving a prison sentence is given in Figure 32.

Figure 32: Diagnoses from psychiatric reports and mental health services of those with a lifetime history of mental illness receiving a prison disposal



Note: Other diagnoses include anxiety/phobia/panic/OCD, organic disorder, learning disability, substance misuse

4.2 DEFINITIONS OF MENTAL DISORDER

There is no single definition of mental disorder and there are therefore several ways of estimating the rate of mental disorder in people convicted of homicide (Table 19). Definitions can be based on:

- a previous diagnosis of mental disorder (i.e. disorder occurring any time before the offence)
- specific diagnostic groups (e.g. schizophrenia)
- symptoms of mental illness at the time of the offence
- commitment to psychiatric hospital following conviction
- previous contact with mental health services.

4.2.1 Perpetrators with mental illness at the time of the offence

Fifteen (11%) perpetrators were described in psychiatric reports as having symptoms of mental illness at the time of the offence. Eight (53%) were psychotic, i.e. most had delusions and/or hallucinations. Six of those with psychosis had a diagnosis of schizophrenia at some point prior to the offence. Seven had a diagnosis of affective disorder (47%). Five (33%) of the overall group had been in contact with mental health services in the previous year. Five had a history of violence. Five (33%) who were mentally ill at the time of the offence were convicted of murder, and 12 (80%) received a prison disposal.

Table 19: Definitions of mental disorder in people convicted of homicide

	Number (142)	%
Mental disorder (lifetime) including alcohol and drug dependence	60	42
Mental disorder (lifetime) excluding alcohol and drug dependence	35	25
Schizophrenia (lifetime)	6	4
Abnormal mental state at the time of the offence	15	11
Hospital order (with or without restriction)	3	2
Contact with mental health services (lifetime)	41	29
Contact with mental health services within 12 months of the offence (patients)	21	15

4.3 PATIENT HOMICIDES

4.3.1 Contact with mental health services

In the total sample of 142 homicide convictions between January 2000 to December 2008, 21 perpetrators (15%) were confirmed to have been in contact with mental health services in the 12 months before the offence, i.e. 2 per year. In addition, 20 perpetrators had been in contact with mental health services at some time, a total rate of previous contact of 30%. We received completed questionnaires in 40 cases, a response rate of 98%. There were a further 15 people in whom mental health service contact was referred to in the psychiatric reports but not confirmed by extensive enquiry.

We will describe the findings on the 21 cases in contact with services within 12 months of the offence.

4.3.2 Social characteristics

As with homicides in the general population, most were male, unmarried and unemployed and half lived alone (Table 20). Most were young men with a median age of 31 years (Figure 33).

Figure 33: Patient homicide: age and sex of perpetrator

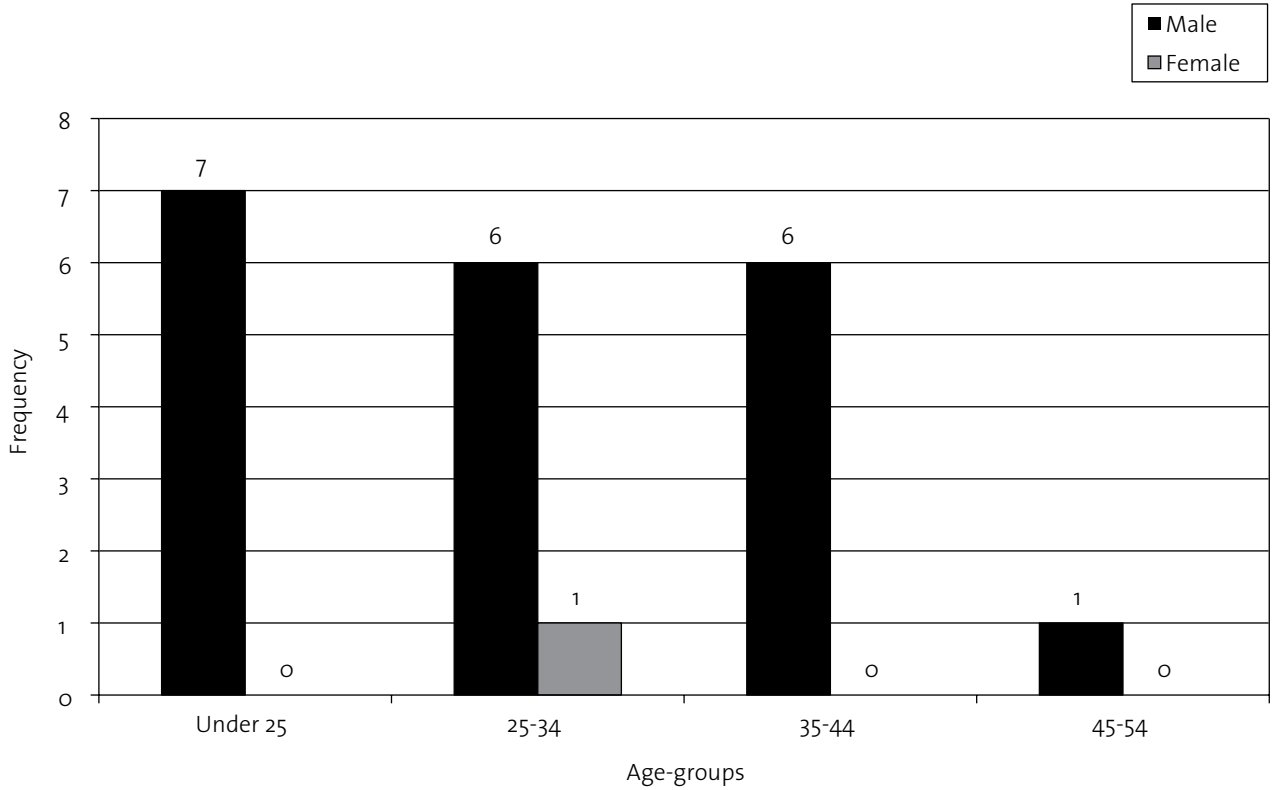


Table 20: Social, clinical characteristics, and final outcome in court for patients[†]

	Number (21)	%	(95% CI)
Demographic features			
Age of perpetrator: median (range)	31 (16-46)		
Male perpetrator	20	95	(76-100)
Not currently married	17	81	(58-95)
Unemployed	17	85	(62-97)
Long-term sick	2	10	(1-32)
Living alone	10	50	(27-73)
Homeless	1	5	(0-24)
Priority groups			
In-patients	0	-	
Post-discharge patients	9	43	(22-66)
Missed last contact	10	53	(29-76)
Treatment refusal in last month	4	25	(7-52)
Clinical features			
Primary diagnosis (lifetime):			
Schizophrenia & other delusional disorders	2	10	(1-30)
Affective disorder (bipolar disorder & depression)	3	14	(3-36)
Alcohol dependence	7	33	(15-57)
Drug dependence	2	10	(1-30)
Personality disorder	4	19	(5-42)
Mentally ill at the time of the offence	5	31	(11-59)
Any secondary diagnosis	17	81	(58-95)
Duration of mental illness (under 12 months)	5	29	(10-56)
Over 5 previous admissions	5	24	(8-47)

[†] data from questionnaires

Table 20: Social, clinical characteristics, and final outcome in court for patients† (continued)

	Number (21)	%	(95% CI)
Clinical features			
Last contact within 7 days of the offence	2	10	(1-30)
Symptoms at last contact	12	57	(34-78)
Estimate of immediate risk: low or none	13	81	(54-96)
Estimate of long-term risk: low or none	7	44	(20-70)
Homicide thought to be preventable	1	7	(0-32)
Behavioural features			
Previous convictions for violence	10	53	(29-76)
Final outcome			
Murder	7	33	(15-57)
Manslaughter	14	67	(43-85)
Disposal			
Prison	20	95	(76-100)
Hospital order	1	5	(0-24)

† data from questionnaires

4.3.3 Offence

Over a quarter (5 cases, 28%) of patients killed a current or former spouse/partner, while nearly three quarters (13 cases, 72%) killed an acquaintance (Table 20; Figure 34). None killed a stranger. The commonest method of homicide was the use of a sharp instrument (9 cases, 60%) (Figure 35).

4.3.4 Previous violence

Ten patients (53%) had previous convictions for a violent offence; in 2, this was not documented in the case notes (Table 20). Eleven patients (55%) had a history of violence towards another person documented in the case notes.

Figure 34: Patient homicide: relationship of victim to perpetrator

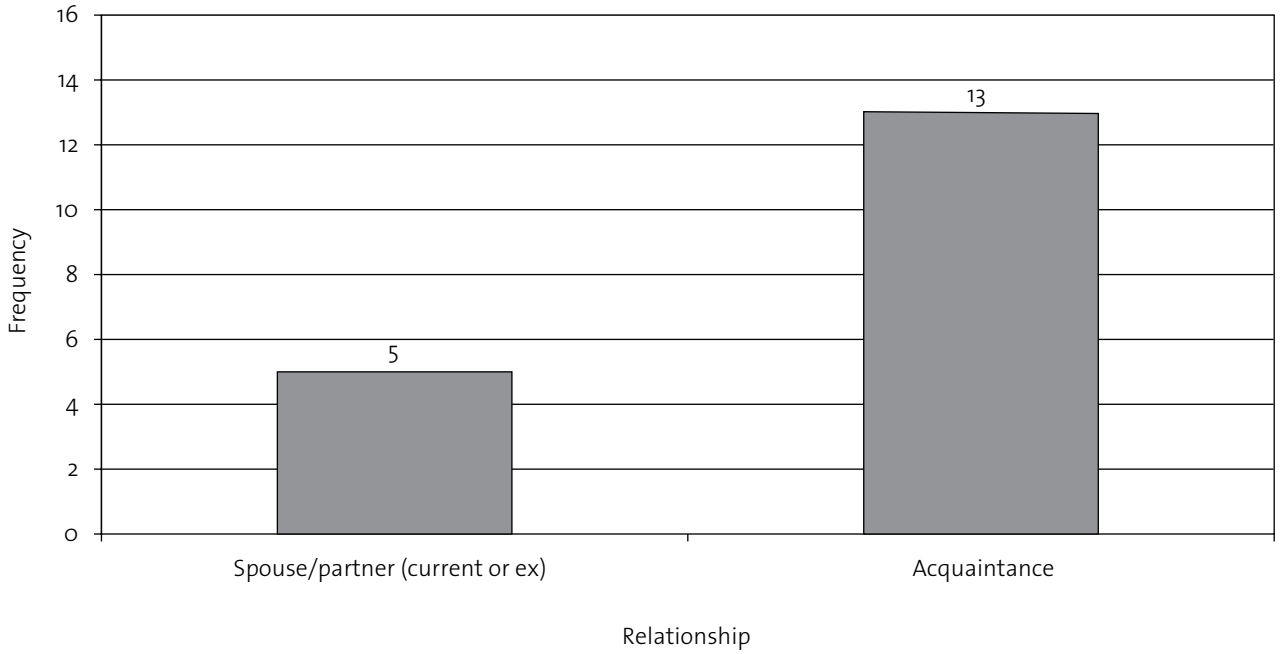
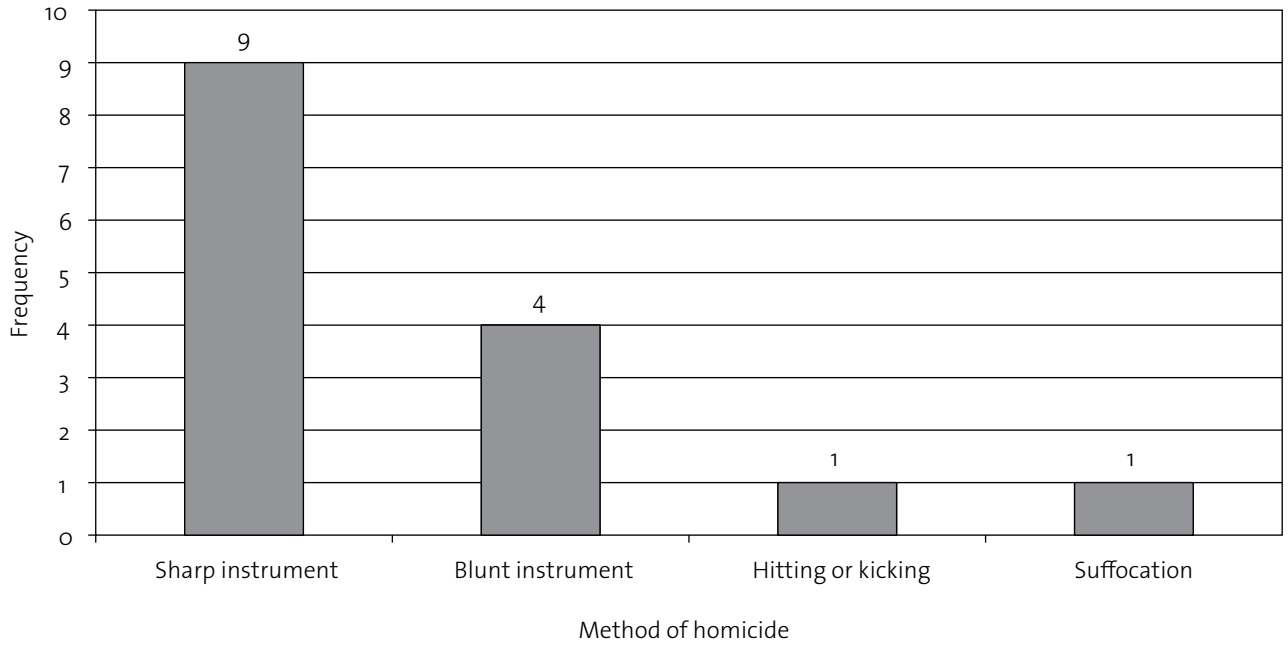


Figure 35: Patient homicide: method of homicide



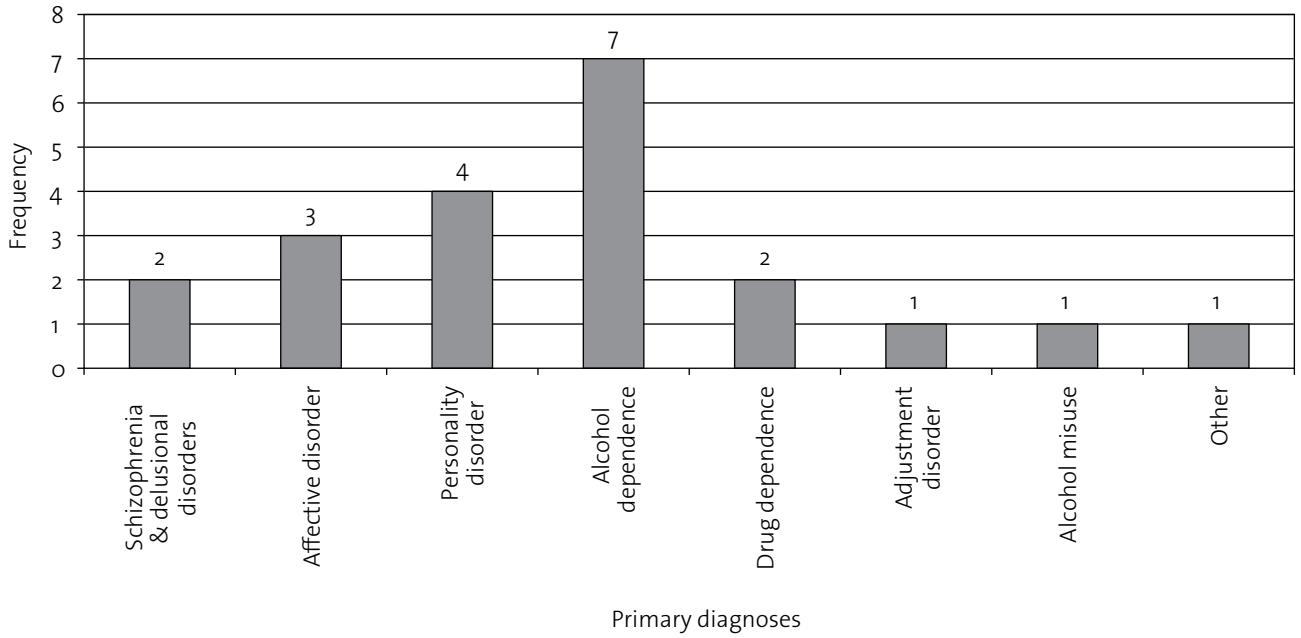
4.3.5 Clinical characteristics

A breakdown of primary diagnoses (provided by clinicians completing the questionnaire) is given in Table 20 and Figure 36. The most common primary diagnosis was alcohol dependence. Nearly a quarter had severe mental illness (schizophrenia or affective disorder). Seventeen (81%) also had at least one secondary diagnosis, the most common being personality disorder and alcohol dependence. In 5 cases (29%) the onset of mental disorder had been in the previous year.

4.3.6 Location of care

None of the patients were in-patients at the time of the homicide. However, 9 (43%) occurred within 3 months of discharge from in-patient care – 4 of these within 3 weeks of leaving hospital. Of the 5 patients with schizophrenia or affective disorder, 1 had a care-coordinator allocated.

Figure 36: Patient homicide: primary diagnoses



4.3.7 Last admission

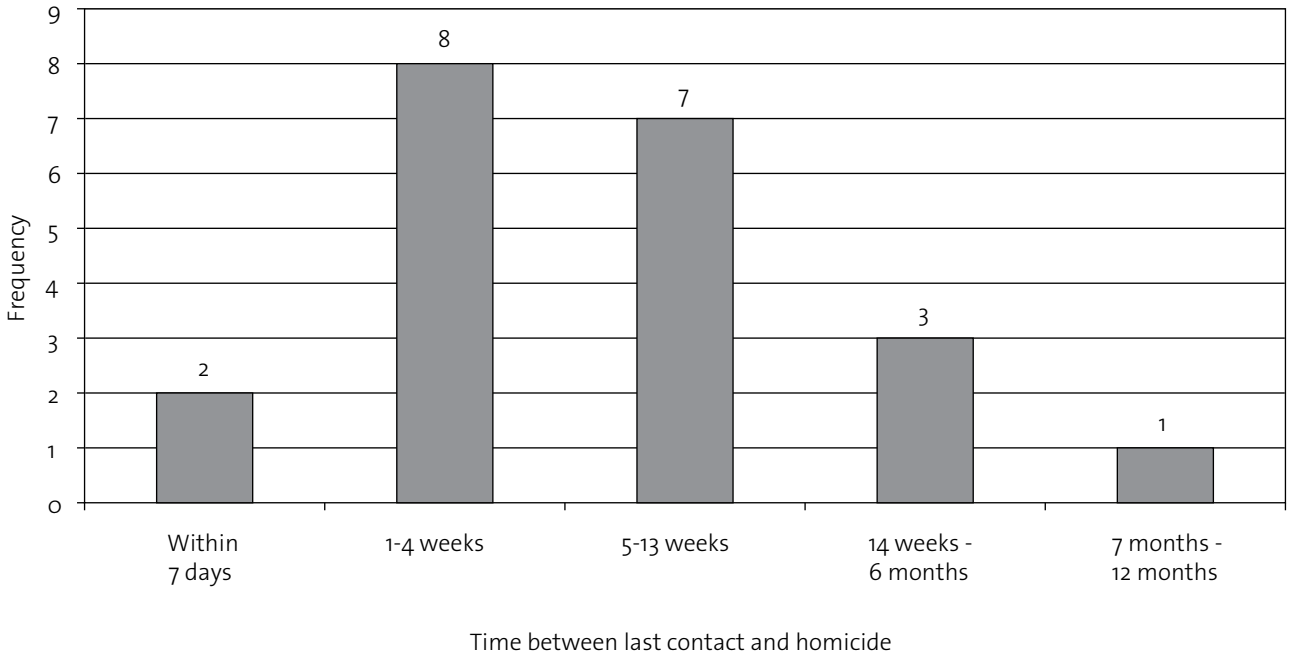
Seventeen (81%) had previous admissions to hospital. In 5 the last admission was a re-admission within 3 months of a previous discharge. In 3 the last admission was under the Mental Health Act. In 9 the final admission lasted less than 7 days. Of these, discharge was patient-initiated, i.e. against medical advice or the result of the patient's behaviour on the ward, in 7.

4.3.8 Treatment refusal and missed contact

Ten patients (59%) were receiving some form of pharmacotherapy. Only 1 was regarded as receiving any form of psychological intervention. Four had refused drug treatment in the month before the offence.

Ten patients missed their final contact with services before the homicide. Two of these patients had a care co-ordinator allocated. In 7 (70%) follow-up action was taken, i.e. sending a further appointment (4 cases), sending a letter to the patient asking him/her to make contact (2 cases), or making a telephone call (1 case), but home visits took place in none of these cases. One of these "missed contact" patients had a diagnosis of schizophrenia and 2 were psychotic, experiencing delusions and hallucinations at the time of the offence.

Figure 37: Patient homicide: timing of last contact with mental health services



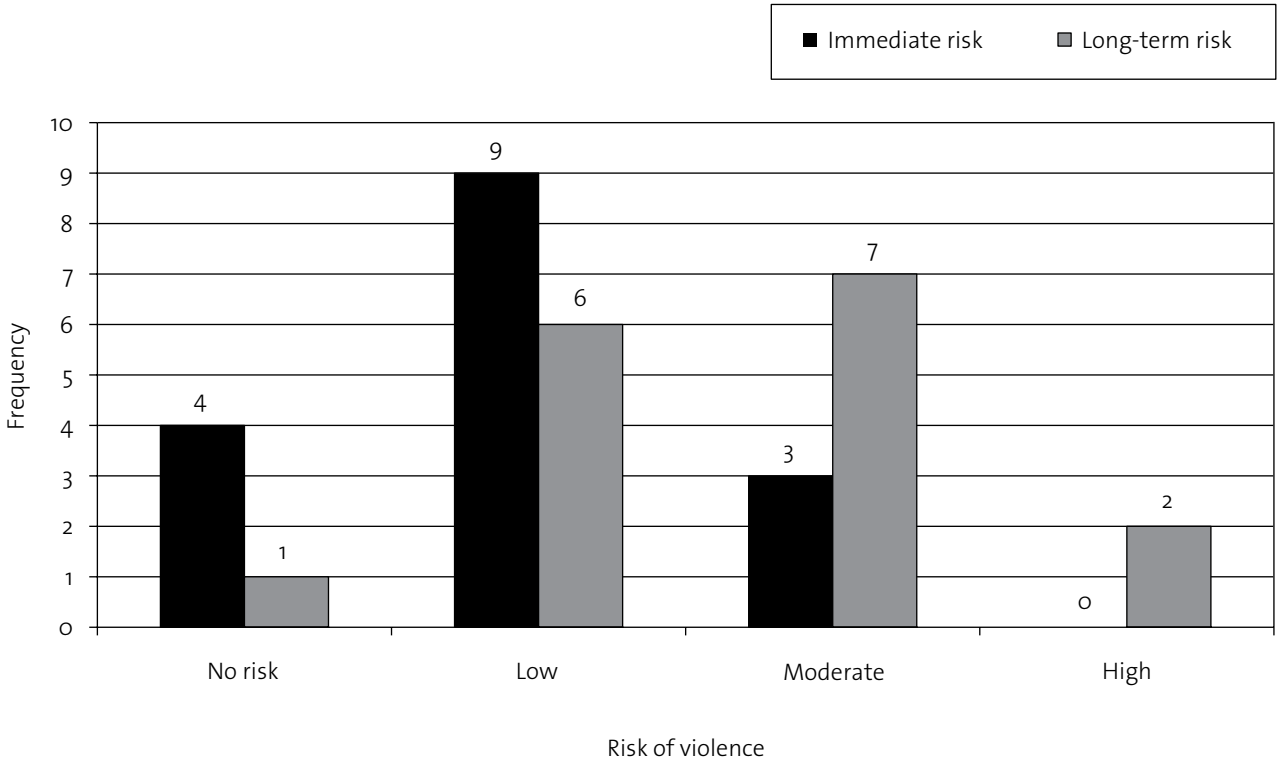
4.3.9 Last contact with mental health services

The timing of last contact with services is shown in Figure 37. Ten (48%) were seen within 4 weeks of committing the offence. In 12, the last contact was with general mental health services. Five patients had been under alcohol services or combined alcohol and drug services, 1 under child and adolescent services, 1 under liaison psychiatry, and 1 under learning disability services (1 unknown).

4.3.10 Risk assessment at last contact

Assessment at final contact revealed abnormalities of mental state or a change in recent behaviour in 12 patients (57%). How staff perceived the risk of violence at final contact is shown in Figure 38. In 13 patients (81%), immediate risk was judged to be low or absent but in 9 (56%), long-term risk was judged to be moderate or high.

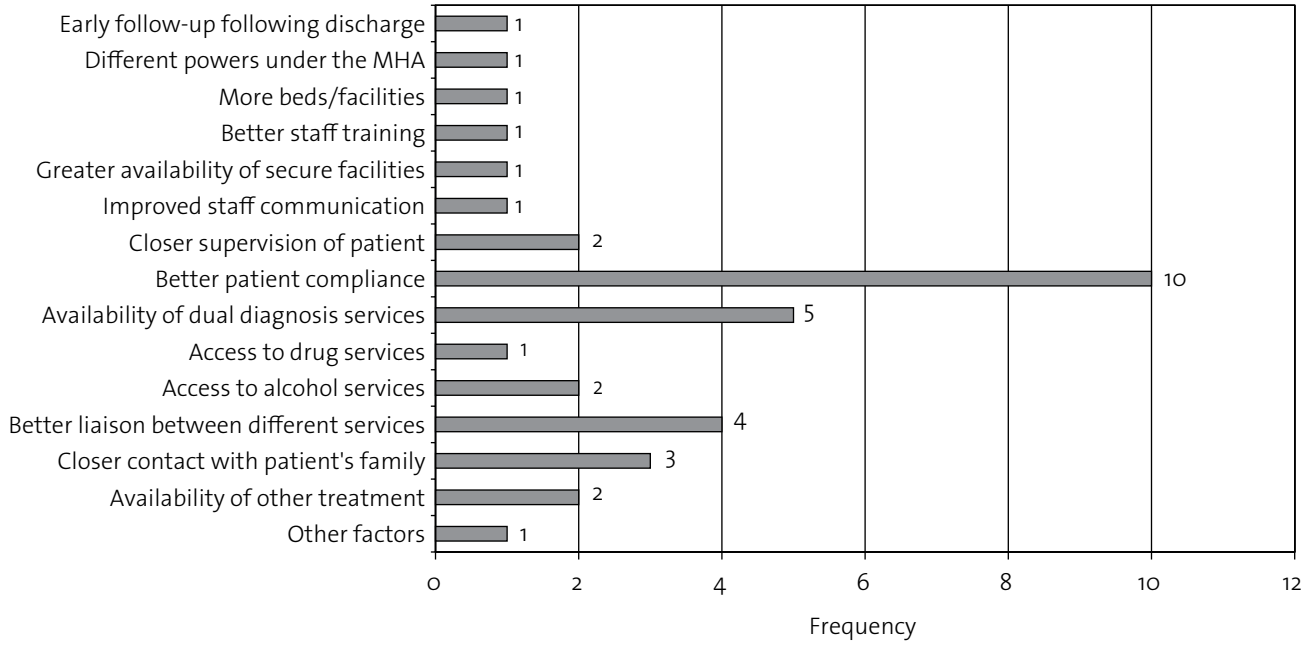
Figure 38: Patient homicide: mental health teams' estimation of violence risk at last contact



4.3.11 Clinician's views of prevention

In only 1 case, the respondent believed that the homicide could have been prevented. However, factors were identified in 12 cases that, according to clinicians, would have made the homicide less likely. These factors are shown in Figure 39. The most common were better patient compliance with treatment and the availability of dual diagnosis services.

Figure 39: Patient homicide: mental health teams' views on factors that could have reduced the likelihood of homicide



4.4 SCHIZOPHRENIA

Six people convicted of homicide during the study period had a diagnosis of schizophrenia according to court reports or services, i.e. fewer than 1 per year. This represents 4% of all convictions. All were male. Two had previous convictions for violence against the person. Four killed an acquaintance, 1 killed a current partner and 1 killed a parent. Four used a sharp instrument in the homicide.

All 6 were considered to have an abnormal mental state at the time of the offence. Three had been in contact with services within 12 months of the homicide, 2 had previous contact with services but not in the last year and 1 had no previous contact. One patient had an allocated care co-ordinator. All of the cases were convicted of manslaughter and 3 received a prison sentence.

4.5 ALCOHOL AND DRUG DEPENDENCE AND MISUSE

This section refers to the whole sample, whether or not they were mental health patients. Contact with mental health services is described.

4.5.1 Alcohol dependence

Twenty-three perpetrators had a diagnosis of alcohol dependence noted in psychiatric reports and in questionnaires, 16% of all convictions. Twenty-one were male. Eleven had convictions for violence. Five killed a family member or a current or former spouse/partner. In 11 homicides the victim was an acquaintance and in 2 cases a stranger. Six cases were convicted of murder and all 23 cases received a prison disposal.

Patients with alcohol dependence

Eleven patients who had been seen by mental health services in the year before committing a homicide had a diagnosis of alcohol dependence, 52% of patients in the study (in 7, this was the primary diagnosis). Of these 11 patients, 5 were discharged from in-patient care within 3 months of the homicide, 5 missed their last appointment with services, and 2 had refused treatment. None was under the Care Programme Approach (CPA). In 8 patients (80%), immediate risk was judged to be low or absent but in 5 (50%), long-term risk was judged to be moderate or high. None was considered preventable by respondents.

4.5.2 Alcohol misuse

Sixty-nine people had a history of alcohol misuse (49% of all cases, 81% of valid cases). Sixty-seven (97%) of these were male. Fourteen (30%) were mentally ill at the time of the offence. Nineteen (28%) were patients, of whom 4 had their last contact with alcohol or combined alcohol and drugs services. Forty-two (61%) were convicted of manslaughter. Sixty-six (96%) perpetrators received a prison disposal.

4.5.3 Drug dependence

Two people were diagnosed with drug dependence, 1% of all convictions. Both had been seen by mental health services in the year before the homicide.

4.5.4 Drug misuse

Fifty-eight people had a history of drug misuse, 41% of all those convicted. Based upon cases where the information was known (valid percentage), the commonest drugs taken regularly in the year prior to the homicide were cannabis (19 cases, 51%), ecstasy (13 cases, 35%) and cocaine/crack cocaine (6 cases, 15%). Of these, the majority were male (55 cases, 95%). Seven (21% of valid cases) were mentally ill at the time of the offence. Fifteen (26%) were patients, of whom 2 had their last contact with combined alcohol and drug services. Thirty were convicted of manslaughter. Fifty-six (97%) received a prison disposal.

4.5.5 Dual diagnosis

There were 13 homicide perpetrators with severe mental illness (schizophrenia or affective disorder) and co-morbid alcohol or drug dependence or misuse ("dual diagnosis"), including 5 patient homicides. All were male (13 cases). Five had previous convictions for violence. Seven killed an acquaintance. Six had a primary diagnosis of schizophrenia, 5 of whom had a history of drug misuse. Five were in contact with mental health services within 12 months of the offence. Three received a hospital disposal.

4.6 SUMMARY AND COMMENT

There is no definitive record of homicide convictions in Northern Ireland and this has led us to present overall aggregate data but no annual trends. Any under-reporting is likely to have a smaller effect on findings based on the whole 2000-2008 sample.

In the general population most homicides were committed by men, particularly young men, and their victims were usually male also. The most common method of homicide was by sharp instrument.

Perpetrator and victim were known to each other in the majority of cases, most commonly as acquaintances. "Stranger homicides" appear to have increased – these are important in explaining public fear of mentally ill people. In fact, people who killed a stranger were less likely to have a history of mental disorder – none was mentally ill at the time of the offence and none had recently been under mental health care.

Fifteen percent of people convicted of homicide were known to have been in contact with mental health services in the year before the offence. This is around half the figure for suicide. There were 6 homicides by people with schizophrenia over the 9-year period, of whom 3 were recent patients.

Patients convicted of homicide followed the general population pattern in being mainly young and male, in using a sharp instrument, and in killing an acquaintance. The majority had a history of violence, usually but not always documented in their case notes.

As with suicide, patients who committed a homicide were usually seen as at low or no immediate risk at their final contact with services, although long-term risk was judged to be higher. In only 1 case out of 41, the clinician thought the homicide could have been prevented.

In almost half the cases, the patient had been discharged from in-patient care in the three months before the homicide. In over half, the patient missed their final contact with services - following missed contact, follow-up of some kind was usually arranged but in no case was this a home visit. Clinicians most often saw tackling treatment refusal as the measure that would have reduced risk. Alcohol and drug misuse were common. Alcohol misuse was found in almost half of all homicides and most of those on which we had relevant information (valid cases). Alcohol dependence was the commonest clinical diagnosis and was associated with previous violence.

The majority of patients convicted of homicide were sent to prison, as were 3 of the 6 people with schizophrenia.

4.7 UK COMPARISONS

We compared homicide characteristics in Northern Ireland with those of the other UK countries. The comparison samples are derived from previously published data and therefore span different time periods, i.e. *Lessons for Mental Health Care in Scotland*, covering 2000-2004, and *Avoidable Deaths* (England and Wales), covering 1999-2003.

4.7.1 General population homicides

A greater proportion of victims were spouse/partners or ex-spouse/partners in Northern Ireland compared to Scotland (25 cases, 22% v. 48 cases, 11%). Although acquaintances were the most common victims in Northern Ireland, significantly more victims were acquaintances in Scotland (42 cases, 37% v. 257 cases, 58%). Stranger homicides were more common in Northern Ireland compared to England and Wales (35 cases, 31% v. 435 cases, 20%). Firearm use was more common in Northern Ireland than in Scotland (9 cases, 8% v. 11 cases, 2%).

4.7.2 Definition of mental disorder

A diagnosis of mental disorder (at any time prior to the offence) was more common in Northern Ireland than in England and Wales (Table 21). Excluding alcohol and drug dependence, mental disorder was also found to be more common in Northern Ireland than in Scotland. A greater proportion of perpetrators in Northern Ireland were mentally ill at the time of the offence than in Scotland. It was more common in Northern Ireland for perpetrators to have had contact with mental health services than in England and Wales.

4.7.3 Patient homicides

In Northern Ireland, the patient had been discharged from in-patient care in the previous 3 months more frequently than in England and Wales (10 cases, 24% v. 43 cases, 10%) and Scotland (10 cases, 24% v. 7 cases, 6%).

Table 21: Definitions of mental disorder in people convicted of homicide (1999-2008): comparisons in the UK

	Northern Ireland (2000-2008)		England and Wales (1999-2003)		Scotland (2000-2004)	
	Number (142)	%	Number (2684)	%	Number (477)	%
Mental disorder (lifetime) including alcohol and drug dependence	60	42	805	30*	193	40
Mental disorder (lifetime) excluding alcohol and drug dependence	35	25	590	22	80	17*
Schizophrenia (lifetime)	6	4	141	5	15	3
Abnormal mental state at the time of the offence	15	11	261	10	25	5*
Hospital order (with or without restriction)	3	2	154	6	13	3
Contact with mental health services (lifetime)	41	29	486	18*	133	28
Contact with mental health services within 12 months of the offence (patients)	21	15	249	9*	58	12

*denotes a significant difference from Northern Ireland

4.7.4 Schizophrenia

Six people with schizophrenia committed a homicide in the 9 years studied in this report. In England and Wales during the same period, there were 318 such cases, in a population around thirty times the population of Northern Ireland, while in Scotland there were 22 cases, in a population around three times the population of Northern Ireland.

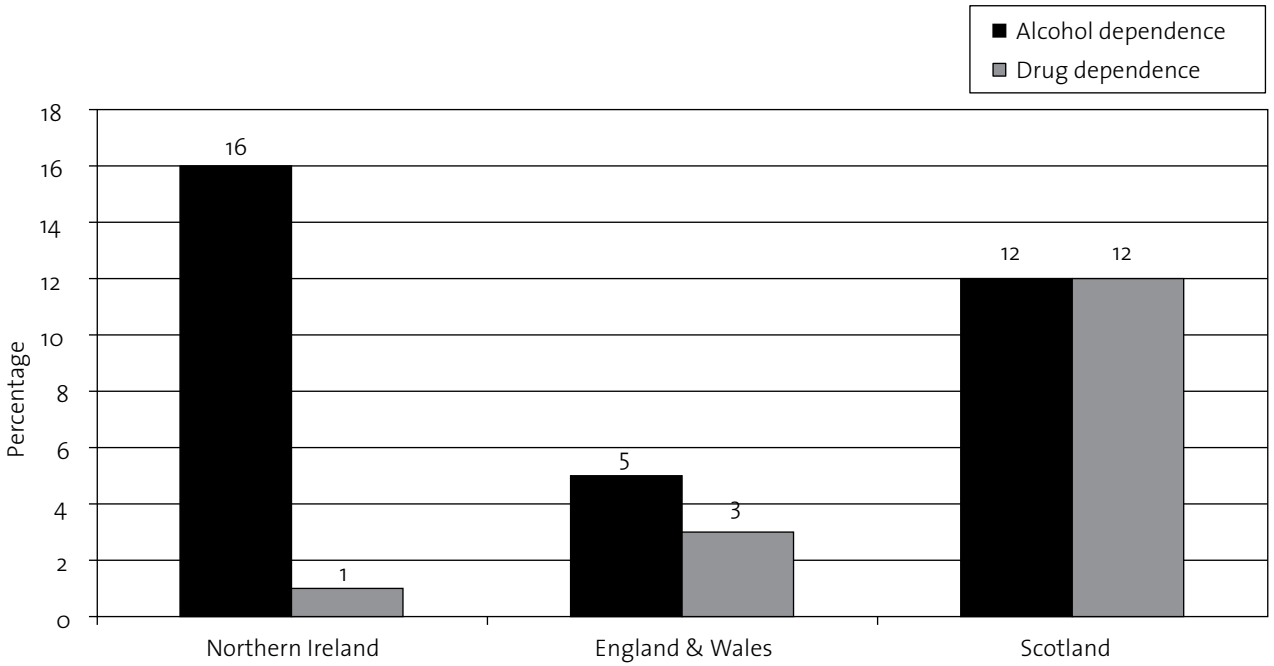
These figures suggest that the risk of homicide from people with schizophrenia could be lower in Northern Ireland, though the numbers are too small to make this any more than a speculative comment.

4.7.5 Alcohol and drug dependence and misuse

More perpetrators in Northern Ireland had a diagnosis of alcohol dependence (23 cases, 16% v. 134 cases, 5%) than in England and Wales. Drug dependence was more common in Scotland than in Northern Ireland (57 cases, 12% v. 2 cases, 1%) (Figure 40) (see method section 2.5.4).

More perpetrators in Northern Ireland had a history of alcohol misuse than in England and Wales (69 cases, 81% v. 584 cases, 50%) and Scotland (69 cases, 81% v. 176 cases, 51%). Drug misuse was more common in Northern Ireland than in England and Wales (58 cases, 69% v. 603 cases, 50%).

Figure 40: General population homicide: alcohol and drug dependence in the UK



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APPENDIX 2: GLOSSARY OF TERMS

The following list defines key terms as used in this report:

Alcohol/drug/substance misuse/dependence The term "drugs" includes heroin and other opiates, amphetamines, ecstasy, cocaine, crack cocaine, hallucinogens, cannabis, and (when used without prescription) benzodiazepines. When alcohol is included, the term "substance" is used. Misuse is an imprecise term referring to excessive consumption that could cause social, physical or legal problems. Dependence is synonymous with addiction, suggesting severe misuse.

Co-morbidity The simultaneous presence of two or more disorders (often refers to severe mental illness and substance misuse).

Psychotropic drugs Any drugs used in the treatment of individuals with mental disorder.

Homicides

Convictions for murder, manslaughter or infanticide in Northern Ireland:

Murder Unlawful killing where the offender is of sound mind and discretion and had malice aforethought (i.e. intent to cause death or grievous bodily harm).

Manslaughter Homicide where there is an absence of intent to kill or there are mitigating factors such as immediate severe provocation, or there is an abnormality of mind of such severity that the perpetrator's responsibility was substantially impaired ("diminished responsibility").

Infanticide Killing by a mother of her own child under the age of 12 months.

Jumping/multiple injuries This method of suicide includes: jumping from a height, lying in front of a road vehicle, train, or other unspecified object.

Mental illness Clinically significant mental disorder other than "behavioural" disorders such as alcohol or drug misuse and personality disorder. Mainly refers to schizophrenia and affective disorders. When "severe" is added, this signifies that the illness is of a severity that would usually lead to contact with mental health services rather than primary care alone.

Mental disorder Any clinically significant mental or behavioural disorder, including alcohol or drug dependence (but not misuse) and personality disorder.

(Non-) compliance (treatment refusal) Refers to (non-)receipt of proposed treatment. Unsatisfactory terms because they carry the implication that the patient should always follow medical instruction. Being superseded by (non-)concordance and (non-)adherence as both a concept and an expression, but retained here because they are still in general use.

Patient case A person on whom the Inquiry obtained questionnaire data. The Inquiry requests information on all persons in contact with mental health services in the year before suicide or at any time before homicide. "Recent contact" homicide cases are those in which the perpetrator had been in contact with mental health services in the 12 months before the homicide.

Patient-initiated discharge Includes discharge following breach of patient contract, e.g. self-harm; or ward rules, e.g. drinking, violence; patient request; self-discharge and self-discharge following a Mental Health Review Tribunal.

Suicides Deaths that at coroner's inquest received a verdict of suicide or an open verdict, excluding verdicts in which suicide was clearly not considered. Therefore includes suicides and probable suicides but excludes suicides receiving any other verdict such as misadventure.

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The full report and previous Inquiry reports and publications are available on our website: http://www.manchester.ac.uk/nci

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