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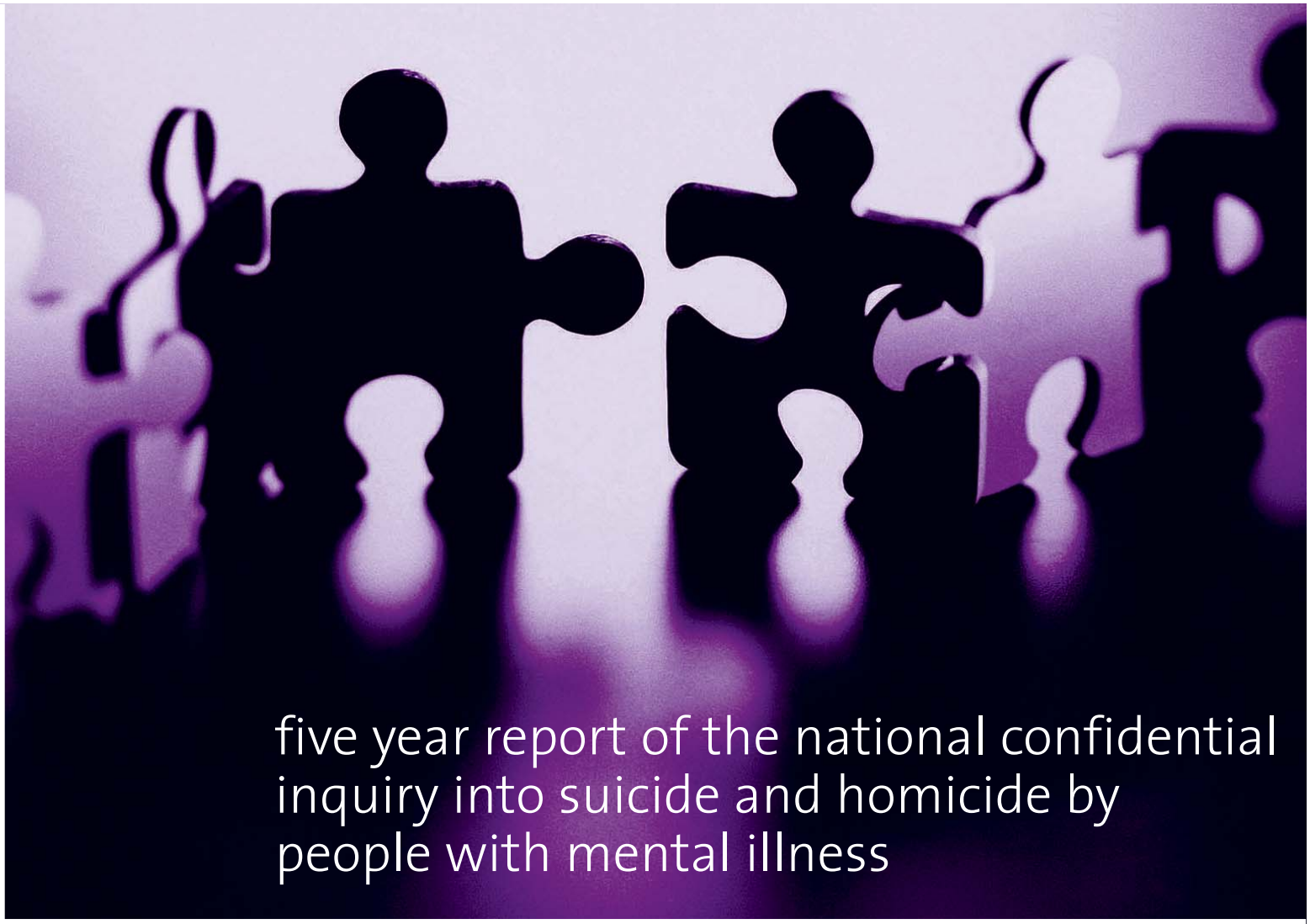

five year report of the national confidential inquiry into suicide and homicide by people with mental illness

AVOIDABLE DEATHS

December 2006

FOREWORD

Safety is at the heart of good health care. In mental health services safety is particularly important but it is also an issue that raises sensitive questions. Where should the balance lie between patient protection and patient autonomy? How great is the risk to the public from mental illness? How many deaths could services prevent?

Avoidable Deaths, the latest report from the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness, attempts to clarify these controversial areas. It provides definitive national figures for England and Wales on patient suicide and patient homicide. It describes the events that precede these incidents, the problems and warning signs on which future prevention must be based. The report covers five years of data collection, and the large number of cases allows a comprehensive examination of detail that is unique in this field of research. It also charts progress since complete national data collection began in 1997 – and there has been progress, particularly on the safety of in-patient wards.

In Avoidable Deaths, findings are also presented on sudden unexplained death on mental health wards, a new area of investigation for the Inquiry. Public and professional concerns have previously been expressed about the role of drug treatments and physical restraint in causing these deaths. Now, for the first time, we have information on the number of cases and the circumstances in which they occur.

The report highlights the areas of clinical practice that need to be strengthened if suicides, homicides and sudden deaths in mental health care are to be prevented, and it puts forward actions that services can take. Although it may be unrealistic to expect services to prevent all or even most of these deaths, the overall conclusion is both challenging and positive: many are avoidable.

Sir Liam Donaldson
Chief Medical Officer for England,
Department of Health

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Psychiatrists and other mental health professionals who have completed questionnaires

Royal College of Psychiatrists

Independent hospitals

Secure units

Mental Health Act Commission

Rethink

Inquest

LIST OF TABLES

LIST OF FIGURES

chapter one

AVOIDABLE DEATHS: SUMMARY OF FINDINGS AND RECOMMENDATIONS

PROGRESS ON SUICIDE

The Inquiry investigated 6,367 cases of suicide by current or recent mental health patients, occurring between April 2000 and December 2004, 27% of all suicides in England and Wales during this period. This figure translates into over 1,300 patient suicides per year.

The main methods of suicide were hanging/strangulation and self-poisoning, which together accounted for 65% of deaths. Suicides by these methods are not falling but there have been small falls in the number of deaths by car exhaust asphyxiation and paracetamol poisoning.

Forty-nine percent of the patients who died had been in contact with services in the previous week, 19% in the previous 24 hours. At final contact, immediate suicide risk was estimated to be low or absent in 86% of cases.

We identified 856 suicides by in-patients. As a proportion of all patient suicides, in-patient suicides have fallen from 17% in 1997 to 11% in 2004 – this translates to 67 fewer deaths in 2004. Deaths by hanging/strangulation on the ward itself fell from 53 in 1997 to 26 in 2004. The proportion of in-patient deaths occurring within seven days of admission has fallen from 24% to 15%.

We identified 1,271 patient suicides occurring within three months of discharge from in-patient care. There has been no clear change in risk associated with the post-discharge period.

There has been a fall in the number of suicides that are preceded by non-compliance with drug treatment. As a proportion of all patient suicides, non-compliant cases have fallen from 22% to 14%, a fall of 71 deaths per year, between 1997 and 2004.

There has been a fall in the number of deaths from self-poisoning with tricyclic antidepressants but the number of deaths in patients with depression has not fallen.

We identified a group of "most preventable" suicides, consisting of 1,108 cases, 18% of the total, or 233 per year. These are the cases most clearly related to service failure.

Previous Inquiry recommendations have been adopted well by services overall. Previous data collection has highlighted a number of patient groups at risk – the number of suicides by patients falling into more than one of these "priority groups" has fallen most. There has been a rise in suicides by patients outside the priority groups.

PROGRESS ON HOMICIDE

The Inquiry investigated 249 cases of homicide by current or recent patients, occurring between April 1999 and December 2003, 9% of all homicides occurring in England Wales during this period. This figure translates into 52 patient homicides per year.

Our data show no clear evidence for either a rise or a fall in the number of homicides by people with mental illness. There has been a rise in the number of perpetrators subsequently judged to have been mentally ill at the time of the offence, but a fall in the number of people found guilty of manslaughter on grounds on diminished responsibility (i.e. mental illness contributed to the offence). The number of patient homicides has not changed; nor has the number of homicides by people with schizophrenia, whether patients or not.

The number of homicides by people with schizophrenia is around 30 per year. This is 5% of all homicides, the prevalence of schizophrenia in the population being 1% or less.

Our findings show that half the perpetrators with schizophrenia were current or recent patients while one third had no previous contact with services. Of perpetrators with personality disorder, 42 were current or recent patients, around 10 cases per year.

The number of "stranger homicides" (perpetrator and victim not known to each other) in which the perpetrator was mentally ill has not risen – by these figures, the risk to the general public is not increasing.

Twenty-nine percent of patients who committed homicide were seen by mental health services in the previous week. At final service contact, immediate risk was judged to be low or absent in 88% of cases.

We have calculated the number of "most preventable" cases to be 34 cases, 14% of all patient homicides, or 7 per year. These are the cases most clearly related to service failure.

FUTURE PREVENTION

In this section we highlight key areas relevant to prevention, as well as potential solutions that can be adopted by services.

1. Absconding from in-patient wards

Two hundred and twenty-seven (27%) in-patient suicides occurred after the patient left the ward without permission. These deaths clustered in the first 7 days after admission. In mental health services we have to balance patient autonomy and patient safety and at times this can be difficult. But the current situation, in which patients admitted for their own protection can leave a ward within a few hours or days, cannot continue. The solution does not have to be coercive. Wards can reduce absconding by:

- understanding the factors that trigger it, such as a disturbed ward environment or an incident affecting the patient

- making greater use of technology, such as CCTV or swipe cards, to observe and control ward entry and exit.

2. Transition from in-patient ward to the community

Of the 1,271 post-discharge suicides in this report, 192 (15%) occurred in the first week after discharge. Two hundred and fifty-five (22%) occurred before the first follow-up appointment in the community. In addition, 292 in-patient suicides occurred during the period of discharge planning towards the end of an admission. In total therefore, 1,563 deaths by suicide occurred during the transition from ward to community, making this the period of maximum suicide risk. Four hundred and eighty four patient deaths occurred just before or just after discharge. Several measures are needed to manage this transition safely:

- regular assessment of risk during the period of discharge planning and trial leave
- agreed plans to address stressors that will be encountered on leave and on discharge
- the patient to have ways of contacting services if a crisis occurs during leave or after discharge
- early follow-up on discharge, including telephone calls immediately after discharge for high risk patients and face-to-face contact within a week of discharge for anyone receiving "enhanced" care under the Care Programme Approach (CPA)
- support arrangements for people who discharge themselves from wards.

3. Use of CPA and management of risk

Four hundred and thirty-six patients who died by suicide were not subject to enhanced CPA despite a combination of severe mental illness and previous self-harm or previous admission under the Mental Health Act. Similarly, 18 patients who were convicted of homicide were not subject to enhanced CPA despite a combination of severe mental illness and previous violence or previous admission under the Mental Health Act. These groups make up 39% of the "most preventable" suicides and 53% of the "most preventable" homicides. These are the most striking illustrations of the under-use of CPA in people at high risk but they are not the only examples. Services can improve risk management by:

- aligning CPA and risk management more closely, ensuring comprehensive assessment of risk at CPA review
- ensuring that enhanced CPA is used for high risk groups, including people with severe mental illness who are in the early stages of their illness
- jointly reviewing the management of the most high-risk patients with other clinical teams, through local clinical governance.

4. Responding when a care plan breaks down

Sixty-eight patients who died by suicide and six who committed a homicide while under enhanced CPA did not receive the kind of intensive care that CPA is meant to ensure. In other words, when they stopped their medication or missed an appointment, the attempt to re-establish care and treatment was insufficient. There was no face-to-face attempt to encourage compliance with medication, or no direct contact with the patient or their family to re-establish the plan of care. These groups make up 6% of the "most preventable" suicides and 18% of the "most preventable" homicides.

One of the positive findings in the report is that the number of patient suicides that are preceded by non-compliance with treatment has fallen. However, over 100 suicides still occur per year in patients who are non-compliant while taking older antipsychotic or antidepressant drugs.

Overall, 14% of patient suicides and 25% of patient homicides were preceded by non-compliance with drug treatment. Clinicans thought risk could have been reduced by better compliance in 24% of suicides and 24% of homicides.

Services can strengthen their response to the breakdown of a care plan in a number of ways, including:

- robust use of CPA provision e.g. close supervision, home visits, working with families
- use of assertive outreach teams for patients with a history of disengagement from services
- use of modern drug treatments as first line therapy.

5. Attitudes to prevention

A feature of the cases we have investigated is the low proportion that clinicians regarded as preventable – only 19% of suicides and 21% of homicides. To an extent this reflects the recognition that mental health patients overall are a high risk group – it is therefore unrealistic to expect services to prevent all suicides or homicides. However, there is a danger in going from recognising risk in patients as a whole to accepting the inevitability of individual deaths.

Clinicians' views of in-patient suicides illustrate the problem best. In most cases the patient would have been admitted because of suicide risk, to a ward environment offering close observation, therapeutic support and, as a last resort, the use of legal powers. Yet in only 28% of in-patient suicides, did clinicians retrospectively view these deaths as preventable.

Our own calculation of the "most preventable" in-patient suicides – based on, for example, the number absconding or dying while under observation or Mental Health Act powers, gives a figure of 41%, and this is likely to be an under-estimate. In fact, unlike suicide by patients in the community where supervision is less immediate, all in-patient suicides could be seen as preventable.

It is time to change the widespread view that individual deaths are inevitable – such a view is bound to discourage staff from taking steps to improve safety. It may be a reaction to the criticism of services and individuals that can happen when serious incidents occur. Therefore, if mental health staff are to give up the culture of inevitability, it is up to commentators outside clinical practice to give up the culture of blame.

6. Observation on in-patient wards

One hundred and eighty five (22%) in-patient deaths occurred in people who were (or were supposed to be) under observation. Eighteen (3%) were said to be under one-to-one observation. Two conclusions are clear. Firstly, intermittent observation regimes provide long gaps in observation and they are unsuitable for the care of high risk patients unless additional measures are taken, such as the observation of ward exits. Secondly, close observation must be strictly carried out. There should be no gaps in one-to-one observation; and if a patient is to be observed every ten minutes, this time gap must be carefully adhered to.

7. Ward environment

In-patient deaths have fallen substantially, as have ward deaths by hanging, but many suicides still occur through self-strangulation. Clinical and estate staff now need to extend their success in removing non-collapsible curtain rails and eliminate other ligature points, or at least make them inaccessible. This applies in particular to hooks and handles on windows and doors.

8. Dual diagnosis

Dual diagnosis – the occurrence together of mental illness and substance misuse – is one of the central problems facing mental health services. One thousand six hundred and fifty-nine (27%) suicides and 72 (36%) homicides in this report were dual diagnosis cases and, as we use a restrictive definition, the contribution of dual diagnosis to patient suicides and homicides may be substantially more. Previously we have recommended the development of dual diagnosis services in all mental health trusts. However, this is the Inquiry recommendation with the lowest take- up rate of those we have examined. Provision for dual diagnosis should be central to modern mental health care and should include:

- staff training in substance misuse management
- joint working with drug and alcohol teams
- local clinical leadership
- use of enhanced CPA for all those with severe mental illness and a destabilising substance misuse problem.

9. Suicide in older people

Our report includes 740 suicides by people over 65 years of age, 12% of the total. However, as most patients who die by suicide are young, our findings are dominated by the features of these younger cases. In this report we have highlighted the different antecedents of suicide in older patients. They are less likely to benefit from assertive outreach or dual diagnosis teams, but more likely to benefit from good clinical care for physical illness or following recent bereavement.

SUDDEN UNEXPLAINED DEATH

We have identified 235 sudden unexplained deaths (SUD) on mental health in-patient units in England and Wales between March 1999 and December 2004. This translates into 41 cases per year.

These deaths were more common in men and in older patients.

Seventeen of these deaths, 7%, occurred in patients from ethnic minorities.

The following findings are important to future prevention:

1. Safer prescribing

There appeared to be relatively few cases of poor prescribing practice prior to sudden death. For example, only 17 patients (7%) were taking the type of drugs that may have increased the risk of fatal cardiac arrhythmia. However, 8 of these patients had a history of heart disease or respiratory disease. These drugs should always be used cautiously, and they should not be used in such patients.

2. Physical health care

Almost half the patients in the SUD study had a history of cardiovascular disease, and 31% had a history of respiratory disease. Psychiatric wards are naturally most concerned with the treatment of mental illness but these findings also show the importance of good physical health care. Mental health units can improve the safety of in-patients by a number of measures including:

- satisfactory assessment of physical health on admission
- appropriate follow-up of high blood pressure and other evidence of physical ill-health, and in particular cardiovascular disease
- routine inclusion of physical health care in the patient's care plan
- training opportunities for mental health nurses in appropriate physical health care.

3. Restraint

There were few cases of recent restraint. Six patients had been restrained in the 24 hours before death, of whom four had been restrained in the hour before death – this is too few to allow us to draw any overall conclusions. We can say that in at least some of these cases, restraint was an important antecedent of sudden death but we cannot say that the relationship was causal. Even so, this is a highly sensitive area of clinical practice and it is essential that safety standards are high:

- physical restraint should be used as a last resort and to published clinical standards
- staff should follow agreed local protocols on restraint, rapid tranquilisation, and monitoring of the restrained or tranquilised patient
- every incident should be subject to review and local audit
- the use of restraint should be a standing priority for local clinical governance.

4. Resuscitation

We did not find evidence that poor resuscitation procedures contributed to the SUD cases that we investigated. However, it was clear that cardiopulmonary resuscitation (CPR) equipment and resuscitation staff should have been more readily available in a minority of cases. Mental health care is now provided in a large number of dispersed settings in many trusts, and it is important that in each setting there are suitably trained staff and accessible resuscitation equipment.

SUMMARY

The findings in this report suggest that mental health services should take steps to:

(for suicides and homicides)

- reduce absconding from in-patient units
- strengthen the transition from ward to community
- ensure that high risk patients receive enhanced CPA, backed up by peer review in the highest risk cases
- respond robustly when care plans break down
- accept that prevention is possible in many cases, particularly for in-patient suicides
- strengthen observation procedures on wards
- further improve the physical environment on wards
- develop services for dual diagnosis patients
- give greater emphasis to risk management in older people's services.

(for sudden unexplained death)

- further improve the safety of prescribing, in particular by avoiding potentially cardiotoxic drugs in patients with a history of cardiovascular or respiratory disease
- give greater priority to physical health care, particularly on in-patient units
- adopt strict standards for physical restraint and review each incident
- follow protocols for rapid tranquilisation
- ensure that CPR training and equipment are available in all locations where care is provided.

chapter two
ABOUT THIS REPORT

ABOUT THIS REPORT

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, having previously been based in London. It was initially funded by the Department of Health in England and the Welsh Office. In 1999 the National Institute for Clinical Excellence (NICE) was given administrative responsibility for all confidential inquiries in England and Wales.[1]

In April 2005, funding for the Inquiry was transferred to the National Patient Safety Agency (NPSA). The core work of the Inquiry is on suicide, homicide and sudden unexplained deaths. In addition, the Inquiry carries out several projects that build on the core work.

These studies are:

- A study of mental health service provision and rates of suicide
- Homicide followed by suicide
- A case-control study of suicide by psychiatric in-patients and suicides within 3 months of in-patient discharge
- A study of the antecedents of homicide using the psychological autopsy method
- A psychological autopsy study of suicide by people under mental health care
- A study of serious violence by people with mental illness.

Preliminary findings from the first two of these studies are presented in this report.

SUICIDE

Suicide prevention is an NHS priority. In Saving Lives: Our Healthier Nation (1) the Department of Health set a target of a 20% reduction in suicide by 2010. People with mental illness represent one of the most important high risk groups for suicide (2). The National Service Framework for Mental Health (3) sets seven standards for mental health services, one of which concerns suicide prevention. The National Suicide Prevention Strategy for England (4) includes people under the care of mental health services as a priority group.

High rates of suicide are particularly associated with acute episodes of illness (5), recent hospital discharge (6-7), social factors such as living alone (8) and clinical features such as substance misuse (9) and non-fatal self-harm (10).

[1] Since 1997 additional funding has been provided by the Scottish Executive (formerly the Scottish Office) and the Department of Health, Social Services and Public Safety (formerly the Health and Social Services Executive) in Northern Ireland. Data and findings for Scotland will be published separately.

Aim

The aim is 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 having been in contact with mental health services in the previous 12 months
- the number of deaths by suicide in high risk groups (in-patients, patients recently discharged from hospital)
- suicide among sub-group populations (e.g. ethnic minorities, homeless people)
- clinical circumstances and antecedents of suicide under mental health care
- rates of key clinical problems (e.g. non-compliance with treatment, 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 1996 – present). There are three stages to data collection:

1. Information on all general population suicides and deaths from undetermined external cause is collected from the Office for National Statistics.
2. Details on each case are submitted to mental health services in each individual's 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.

The questionnaire 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.

The Inquiry data includes information on people who die by suicide or who receive an open verdict following a coroner's inquest as is the convention in studies of suicide. Open verdicts are not included where it is clear that suicide was not considered at the inquest.

Mental health service provision and Inquiry recommendations

This study assesses the extent to which recommendations in the 2001 Inquiry report, Safety First (11), have been implemented and their impact on the suicide rate.

In this report we present the extent to which individual trusts are compliant with nine suicide prevention recommendations. The nine key service recommendations were selected on the basis of clinical importance and the fact that these were ones which trusts would be most easily able to quantify. In a future report we will examine the association between compliance with recommendations and changes in suicide rates.

HOMICIDE

Criticism of community care has followed the reporting of high profile cases of homicide by people with mental illness (12). Reviews of the prevalence of mental illness in perpetrators of homicide (13-14) have shown the difficulty of drawing conclusions about the relationship between mental disorder and homicide. Difficulties arise due to different definitions of mental disorder and because findings are rarely related to homicides in the general population (15). In 1994 it became mandatory in England for the NHS to conduct independent inquiries after homicides by those in recent contact with mental health services (16-17).

Aim

The aim is 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. non-compliance with treatment, loss of contact with services, substance misuse)
- changes in these statistics over time.

Method

We collect a national consecutive case series of patient homicides occurring since April 1996. There are four stages to data collection:

1. Information on all homicides is collected from the Home Office Homicide Index. Where available, psychiatric reports prepared for the trial are obtained.

2. Information on previous offences is collected from the National Crime Operations Faculty.

3. Details on each case 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.

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

For all homicide convictions, data are collected on methods and victims from the Homicide Index. For all homicide perpetrators with a psychiatric report, the following data are collected from the psychiatric reports provided by the Crown Prosecution Service (CPS): 1) details of mental health, 2) drug and alcohol use at the time of the offence. For Inquiry cases (i.e. those with lifetime contact with mental health services) the questionnaire consists of questions 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.

Psychiatric reports

Psychiatric reports are written in homicide cases, pre-trial, to determine the mental state of the perpetrator at the time of the offence. We obtained one or more reports prepared for the court in 1,323 cases, i.e. on 49% of the total sample. Despite a consistent approach to data collection there has been a decrease in the number of reports obtained. This may be in part because it is no longer a mandatory requirement of the court to seek psychiatric reports on each homicide case. Following a ruling in the case of R v Reid (2001) the court no longer requires medical reports to be obtained.

Definitions of mental illness

The data on mental health come from a variety of sources. Data on diminished responsibility and hospital orders are available on all perpetrators from the Homicide Index. Data on mental illness at the time of offence comes from psychiatric reports prepared for the CPS. Data on the presence of mental illness and on diagnosis are obtained from reports and Inquiry questionnaires. Data completeness for Inquiry cases is high overall at 98% since data collection began but varies from year to year (94%-100%).

Due to delays inherent in the notification procedures data were least complete for the final year of the study (94%). We therefore present projected numbers of Inquiry cases in the longitudinal trend analyses to take account of the different levels of data completeness across years. Projected figures were calculated as for suicide, and analysis of trends was also carried out as described earlier.

Homicide followed by suicide

Information was collected on homicides in which the alleged perpetrators died by suicide before conviction. These cases were notified to the Inquiry via the Homicide Index or by individual police forces. In addition, homicide offences occurring between April 2000-December 2004 were matched with deaths by suicide notified to the Inquiry by the Office for National Statistics (ONS) during the same period. Cases were identified in which the homicide perpetrator and the person dying by suicide were the same.

SUDDEN UNEXPLAINED DEATHS IN MENTAL HEALTH IN-PATIENT UNITS

Sudden death in people with mental illness has been a source of public and professional controversy for three decades (18). A possible factor contributing to sudden death is the use of psychotropic medication, specifically anti-psychotic drugs. One of the proposed mechanisms by which psychotropic drugs might contribute to death is by lengthening the QTc interval (an ECG measure of the electrical "recovery" of the heart following contraction), resulting in a potentially fatal arrhythmia, Torsade de Pointes (19-20).

The role of non-drug factors such as physiological arousal during acute illness, pre-existing cardiac disease or epilepsy and physical restraint is not clear.

Aim

The aim is to collect detailed clinical information on sudden unexplained death (SUD) in mental health in-patients. We investigate:

- the number and rate of SUDs in the mental health in-patient population
- the characteristics of those who died by SUD and the clinical management these patients received
- differences between SUD cases and in-patient controls on a range of clinical risk factors
- SUD in those under 45 years.

Method

For the purposes of this report data are presented on cases of sudden unexplained death only (all ages). A detailed case-control analysis will be the subject of a future publication. People aged 15-75 years who have died on a mental health in-patient ward in England and Wales are identified from a national dataset of all in-patients, provided by the NHS Clearing Service (NWCS) (21) for England, and Health Solutions for Wales (22). The dataset records anonymised patient details, medical specialty, admission dates, type of discharge (including death), and hospital and consultant codes.

Cases of SUD are those in-patients who have died from an unknown cause or a cardiac cause unrelated to myocardial infarction within one hour of the patient being observed in their usual state of health. Death occurring within sixty minutes of the onset of symptoms is an internationally recognised criterion for SUD (23) and has been used in previous studies (20).

For the cases of SUD aged under 45 years, further detailed information is collected from up to four clinical and non-clinical sources. Sources include: inquest files; post mortem reports; other documents (e.g. Ombudsman report). Coroners' files usually include witness statements by the deceased's family members or friends.

All cases of SUD are validated by the Inquiry team to confirm that the criteria for SUD are met. Initial validation of 212 SUD cases and 114 non-SUD cases showed good agreement between consultants and the Inquiry team. There was agreement in 83% of SUD cases and 97% of non-SUD cases.

The rate of SUD (England only) was calculated using as denominator data the number of NHS mental health and learning disability admissions in England during the equivalent calendar year. Denominator data were not available for patients aged 75 years or patients receiving care in Wales. These patients were therefore excluded from the calculation of the rates though not from other findings.

PRESENTATION OF FINDINGS

In the main body of the report, findings are presented for:

- Suicide
- Homicide
- Sudden unexplained deaths.

Additional Inquiry studies are described in Appendix 1. These studies are still in progress. Publications such as scientific papers, based on Inquiry findings, are listed in Appendix 2.

The findings of this report relate to England and Wales. The report covers the period April 2000 to December 2004 for suicide and April 2000 to December 2003 for homicide. Where possible, data on trends are presented for 1997 (the first full calendar year of Inquiry data collection) to 2004 (for suicide) or 2003 (for homicide).

Data completeness for Inquiry cases is high overall at 97% since data collection began but varies from year to year (91%-99%). Due to delays inherent in the notification procedures data were least complete for the final year of the study (91%). We therefore present projected numbers of Inquiry cases in the longitudinal trend analyses to take account of the different levels of data completeness across years.

These are calculated as follows:

(projected number of Inquiry cases) = 100 x [(number of Inquiry cases) / (% completeness)].

To determine if evidence of a statistically significant time trend existed, trend tests have been carried out using categorical data methods.

Suicide rates per 100,000 population are calculated using mid-year population estimates (age greater than 9). Using either general population suicides or Inquiry cases as the outcome, a general linear model (Poisson GLM) has been fitted with mid-year population as the offset. Year is then added as a linear predictor to assess trend.

Comparisons with figures in our previous 5-year report Safety First (11) are included for key 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 4). Many of the main figures are presented in tables of "key variables," which are consistent between sections. Ninety-five percent confidence intervals 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.

Wherever differences between groups are referred to in the text, these are statistically significant. In most analyses statistical significance has been set at 1%, i.e. there is a 1% probability that a reported difference between groups has arisen by chance. In the homicide inquiry and when comparisons in the suicide inquiry involve small groups, e.g. ethnic minorities or homeless people, the conventional figure of 5% has been adopted.

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.

The discrepancy in suicide rates presented in this report and those presented by the Office for National Statistics (ONS) and the National Institute for Mental Health (NIMHE) reflects differences in measurement. The suicide rate reported here is based on suicides in England and Wales from age 10 and over. The ONS suicide rate (www.statistics.gov.uk) includes suicides from age 15 and over and has been standardised using the European Standard Population. The rate presented by NIMHE (National Suicide Prevention Strategy for England Annual report on progress 2005) includes suicides in England only with no age restriction and has been standardised using the European Standard Population.

chapter three
SUICIDE INQUIRY

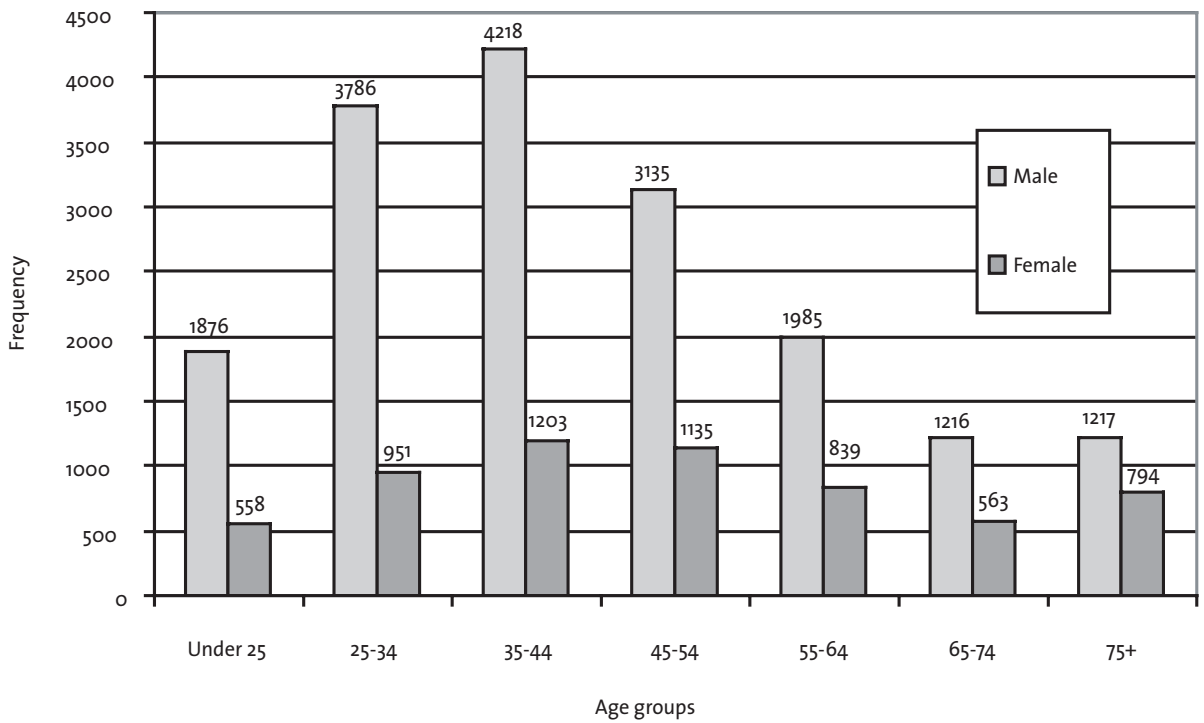
3.1. Are national suicide rates falling?

General population suicides

The Inquiry was notified of 23,477 suicides and probable suicides occurring between April 2000 and December 2004. This included 16,324 cases in which the coroner's verdict was suicide and 7,153 open verdicts or deaths from undetermined cause. This corresponds to an average annual suicide rate of 10.2 per 100,000 population in England and Wales. For the remainder of this section, these cases are referred to as suicides regardless of verdict at inquest.

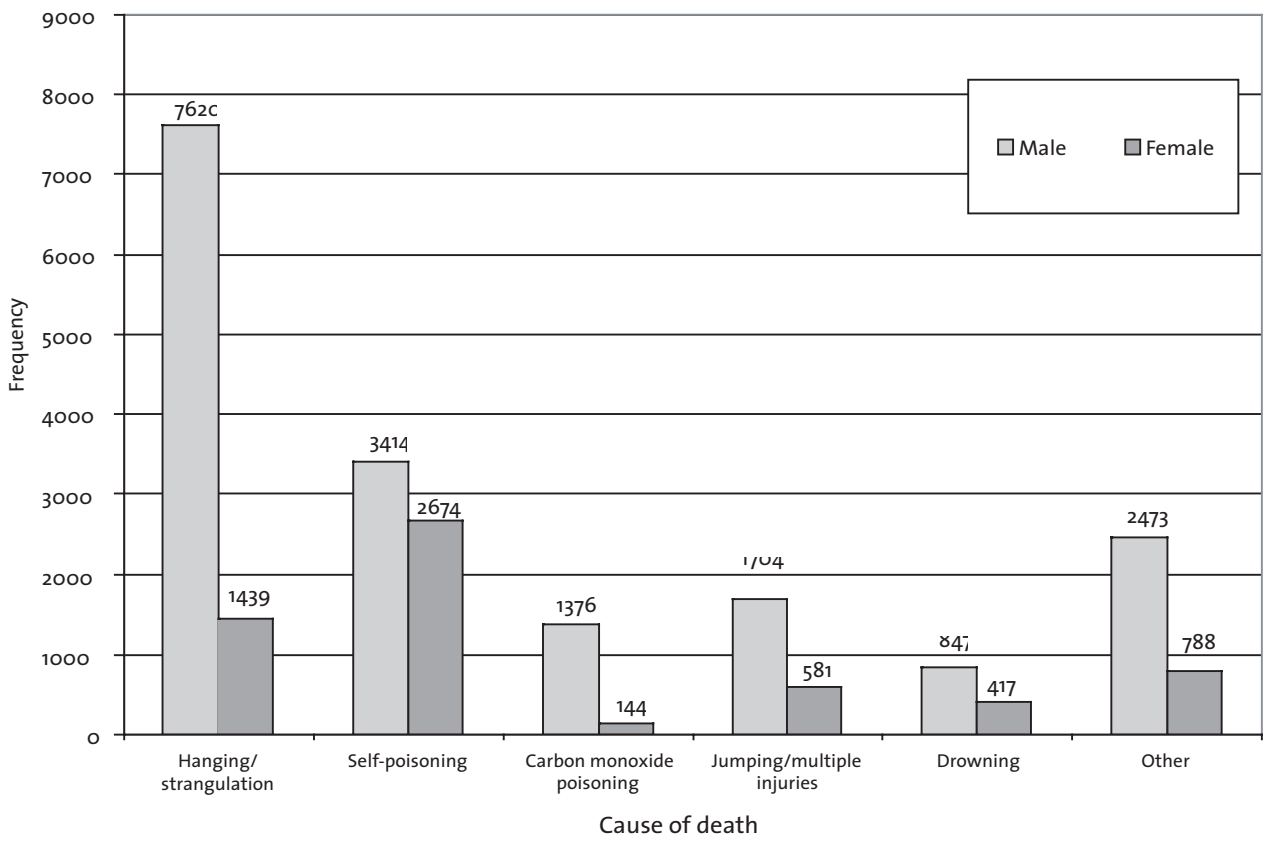
Seventy-four percent (17,434 cases) were male, giving a male to female ratio of 3:1 (Figure 1). The ratio of males to females was highest in the 25-34 year old age group in whom 80% were male and lowest in those over 75 in whom 61% were male.

Figure 1: General population suicides: age and sex profile



Three methods of suicide together accounted for 74% of suicides: hanging/strangulation (the most common method overall), self-poisoning and jumping/multiple injuries (Figure 2). The frequency of methods differed between the sexes: in males the commonest methods were hanging/strangulation, self-poisoning by overdose and jumping/multiple injuries; in females, self-poisoning was by far the commonest method, followed by hanging/strangulation. Violent or "active" methods, i.e. those involving physical injury including hanging/strangulation and jumping /multiple injuries, were used in 48% of deaths overall: 53% of male deaths and 33% of female deaths.

Figure 2: General population suicides: cause of death by sex



OTHER	MALE	FEMALE
Burning	260	135
Cutting/stabbing	490	78
Suffocation	148	133
Firearms	517	25
Electrocution	86	6
Other	920	389
Unknown	52	22
TOTAL	2,473	788

Inquiry suicides

Of the total sample for the period April 2000 to December 2004, 6,367 suicides (27%) were known to be in contact with mental health services in the year before death, a slight increase from 24% in the previous Inquiry report. This figure was relatively consistent throughout the period of data collection varying only between 24% and 29% (Table 1). However, in England it varied widely between Strategic Health Authorities† (16% to 28%; median 24, inter-quartile range 23 to 26).

Overall, the number of general population suicides has decreased since 1997. The highest was recorded in 1998 and the lowest in 2004 (Figure 3). The number and rate of Inquiry cases have not changed significantly since 1997. The highest figures were recorded in 2004. It is important to stress that no firm conclusions can be drawn from a higher proportion of Inquiry cases among general population suicides. It could reflect difficulties in ensuring patient safety but it could equally mean that services are better able to make and maintain contact with high risk patients.

†In Wales, healthcare is delivered by 3 regional offices - too few for comparison.

Table 1: Number of general population and Inquiry suicide cases 1997-2004

Year	General population suicides	Inquiry cases†	% of Inquiry cases
1997	5,360	1,296	24
1998	5,608	1,354	24
1999	5,329	1,361	26
2000	5,123	1,352	26
2001	4,896	1,368	28
2002	4,919	1,328	27
2003	4,980	1,347	27
2004	4,883	1,396	29

†Annual response rates between 1997 and 2004 varied from 91% to 99%. In order to make Inquiry data comparable across the period, the number of deaths by suicide in each year was adjusted to take account of the different levels of data completeness in each year. Rounding differences sometimes occur.

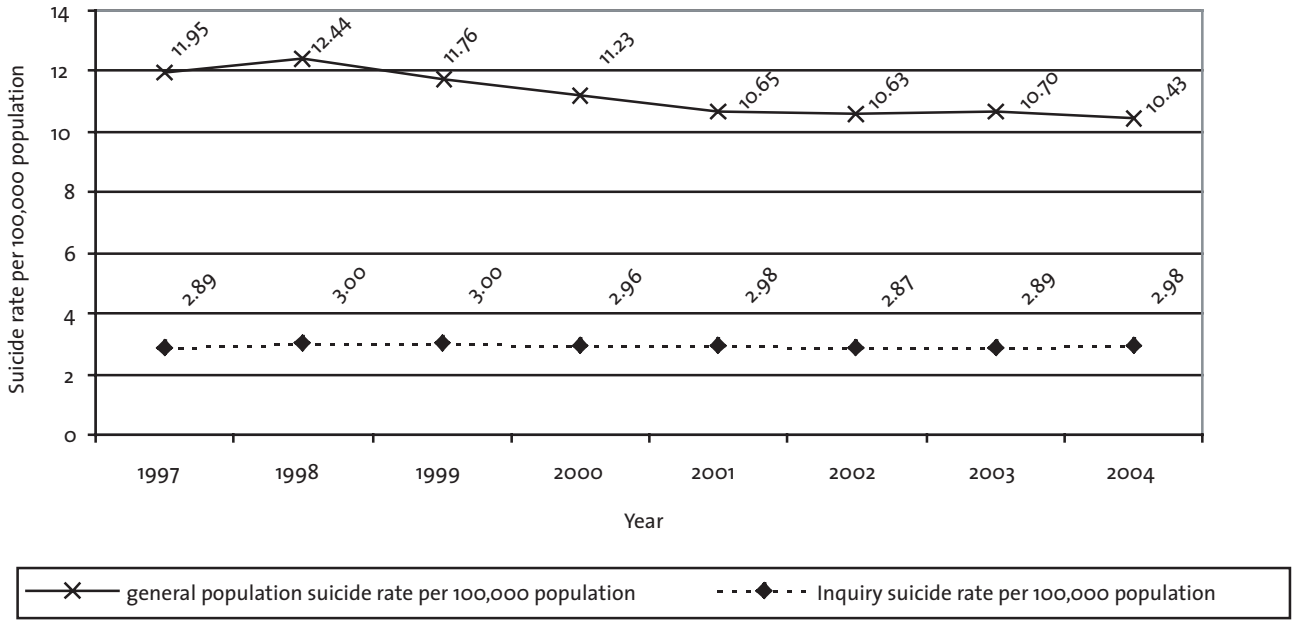
3.2. Which patients die by suicide?

Questionnaires were returned on 6,203 cases, an overall response rate of 97%.

The Inquiry cases were predominantly male but the male to female ratio (2:1) was lower than in the general population suicides (3:1). The proportion of males was higher in the younger age groups. Twelve percent (740 cases) were over sixty-five.

The main social and clinical characteristics of Inquiry cases are presented in Table 2 (overleaf).

Figure 3: Rates of general population and Inquiry suicide cases 1997-2004†



†Trend tests were carried out to determine if there was evidence of a statistically significant temporal trend. The downward trend was significant for general population suicides but not for Inquiry cases.

Table 2: Social and clinical characteristics of Inquiry suicide cases

	Number (6,203)	%	(95% CI)
Demographic features			
Age: median (range)	43 (10-95)	-	-
Male	4,107	66	(65-67)
Ethnic minority	423	7	(6-8)
Not currently married	4,219	69	(68-71)
Unemployed	2,377	40	(39-41)
Long-term sick	1,085	18	(17-19)
Living alone	2,604	44	(42-45)
Homeless	130	2	(2-3)
Priority groups			
In-patients	856	14	(13-15)
Post-discharge patients	1,271	24	(23-25)
Under enhanced CPA	2,118	35	(34-36)
Missed last contact	1,523	29	(28-30)
Non-compliance in last month	813	14	(13-15)

(continued overleaf)

Table 2: Social and clinical characteristics of Inquiry suicide cases (continued)

	Number (6,203)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	1,145	19	(18-20)
Affective disorder (bipolar disorder and depression)	2,821	46	(45-47)
Alcohol dependence	491	8	(7-9)
Drug dependence	206	3	(3-4)
Personality disorder	518	8	(8-9)
Any secondary diagnosis	3,298	54	(53-55)
Duration of history (under 12 months)	1,212	20	(19-21)
Over 5 previous admissions	931	15	(14-16)
Last admission was a re-admission	586	16	(15-18)

(continued overleaf)

Table 2: Social and clinical characteristics of Inquiry suicide cases (continued)

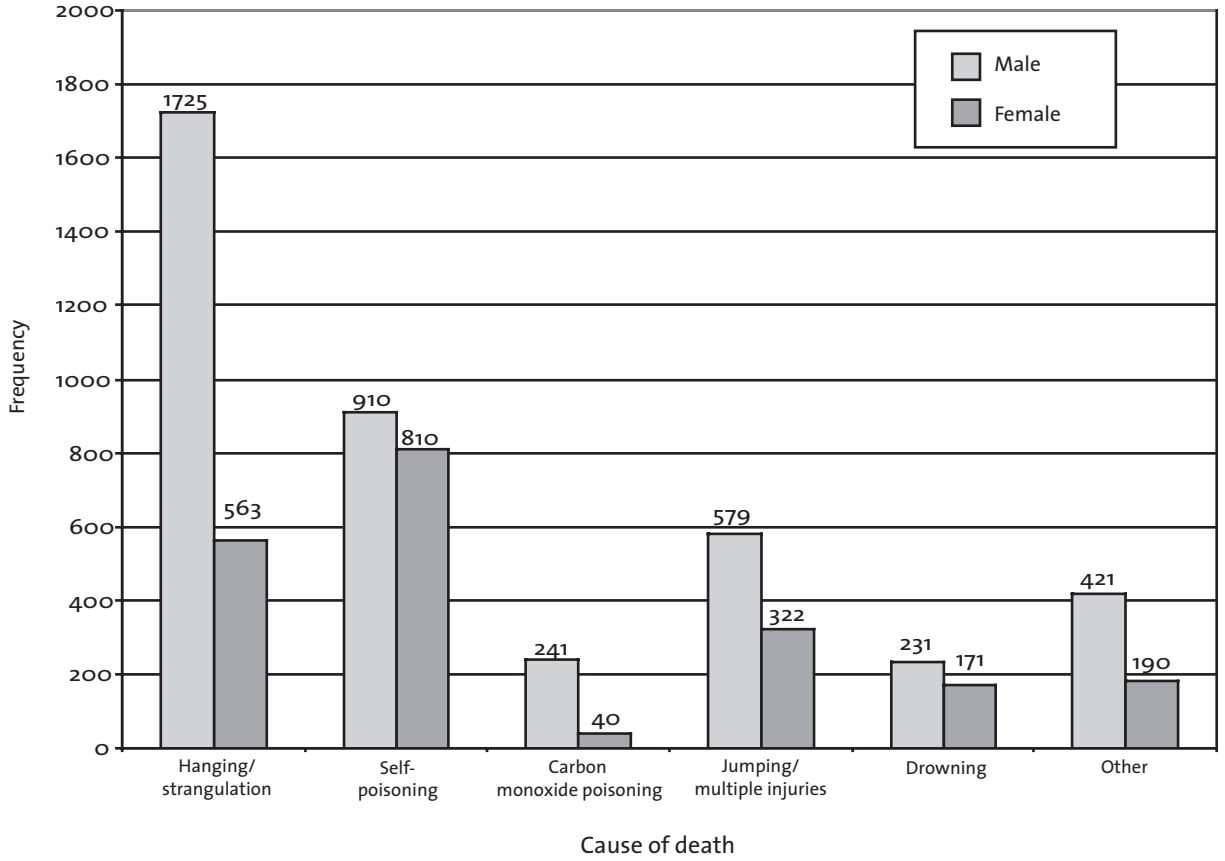
	Number (6,203)	%	(95% CI)
Behavioural features			
History of self-harm	4,124	68	(67-69)
History of violence	1,291	22	(21-23)
History of alcohol misuse	2,631	44	(42-45)
History of drug misuse	1,789	30	(29-31)
Contact with services			
Last contact within 7 days of death	2,955	49	(47-50)
Symptoms at last contact	3,759	63	(62-65)
Estimate of immediate risk: low or none	4,984	86	(85-87)
Estimate of long-term risk: low or none	3,368	59	(58-61)
Suicide thought to be preventable	1,017	19	(18-20)

Causes of death

The most common methods of suicide for Inquiry cases were hanging/strangulation and self-poisoning, accounting for 65% of deaths (Figure 4). This was true of all age groups but there were age-related differences in the pattern of suicide method. The younger groups were proportionally more likely to die by hanging/strangulation or jumping/ multiple injuries and less likely to die by self-poisoning. The oldest groups had the highest proportion of people who died by drowning.

Those who died by self-poisoning were more likely to use psychotropic drugs, analgesics or opiates. The main psychotropic drugs used were tricyclic antidepressants. Psychotropic drug overdose was more likely to be the cause of death in patients who had carried out a previous episode of self-harm than in those whose suicide was their first self-harm episode. Two percent of all suicides and 10% of overdoses used paracetamol (147 cases). This represents a decrease from 4% and 12% respectively from the cases reported previously, a reduction of 14 cases per year.

Figure 4: Method of suicide used by Inquiry cases by sex



SELF-POISONING	MALE	FEMALE
Psychotropic drug	358	315
Paracetamol	54	93
Opiate	182	113
Other analgesic	115	119
Other	104	72
Unknown	97	98
TOTAL	**910**	**810**

OTHER	MALE	FEMALE
Burning	70	49
Cutting/stabbing	113	32
Suffocation	51	50
Firearms	51	8
Electrocution	22	1
Other	109	43
Unknown	5	7
TOTAL	**421**	**190**

Table 3: Change in methods of Inquiry suicide cases 1997-2004

Year	Hanging/ strangulation	Self poisoning	Jumping/ multiple injuries	Carbon monoxide poisoning	Drowning	Other†
1997	372	445	171	87	80	114
1998	492	396	160	83	95	106
1999	490	402	175	84	84	119
2000	491	368	192	71	86	144
2001	476	396	207	70	94	123
2002	497	348	203	68	82	122
2003	495	366	210	56	89	130
2004	544	404	174	48	91	134
Total	**3,857**	**3,125**	**1,492**	**567**	**701**	**992**

† Other methods of suicide included: cutting or stabbing, burning, suffocation, firearms and electrocution

Changes in the cause of death during 1997-2004 are presented in Table 3. No clear trend was discernible for hanging/strangulation though the highest number was recorded in 2004. There was an overall decline in the number of cases of carbon monoxide poisoning (car exhaust).

Social and clinical factors

Social characteristics

Social adversity and isolation were common among Inquiry suicide cases. Sixty-nine percent were not currently married (Figure 5), and in those aged over 65 years 251 (34%) were widowed.

Figure 5: Marital status: Inquiry suicide cases

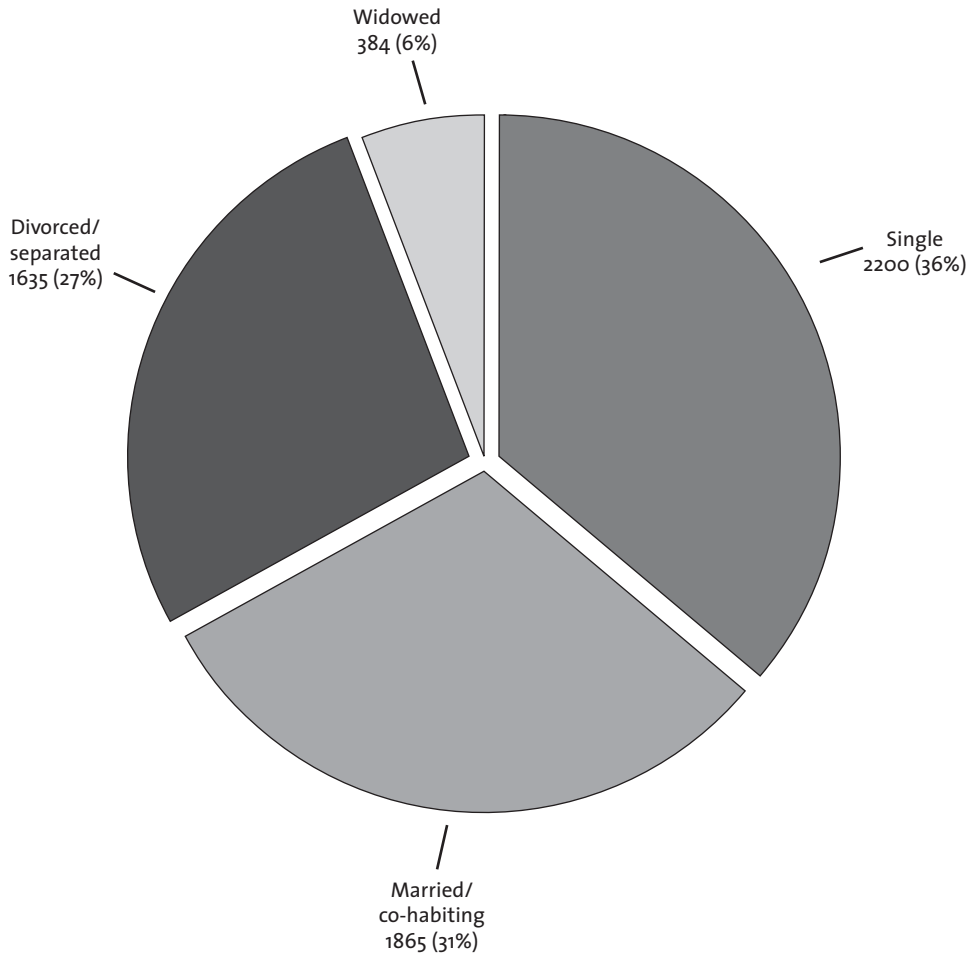
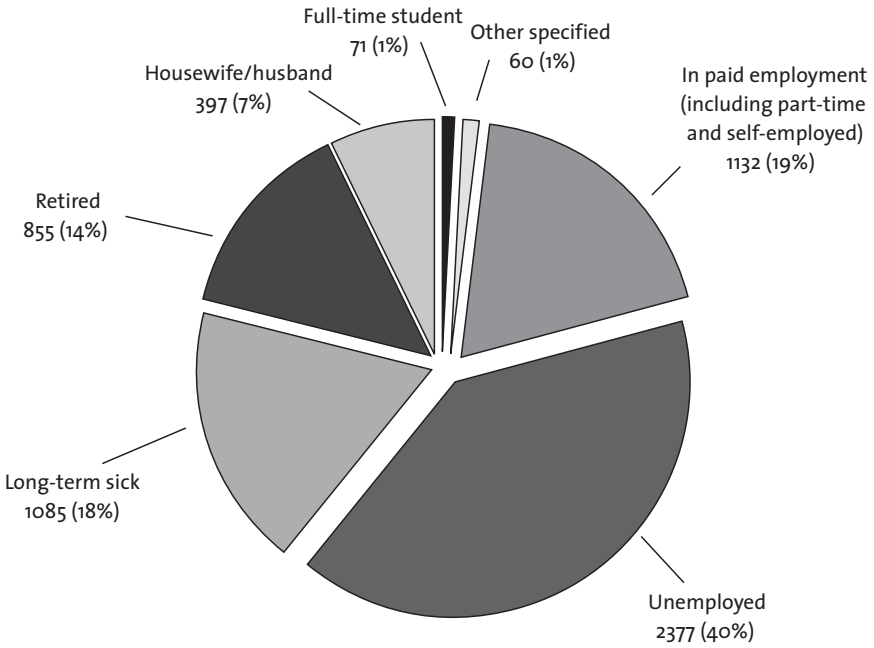
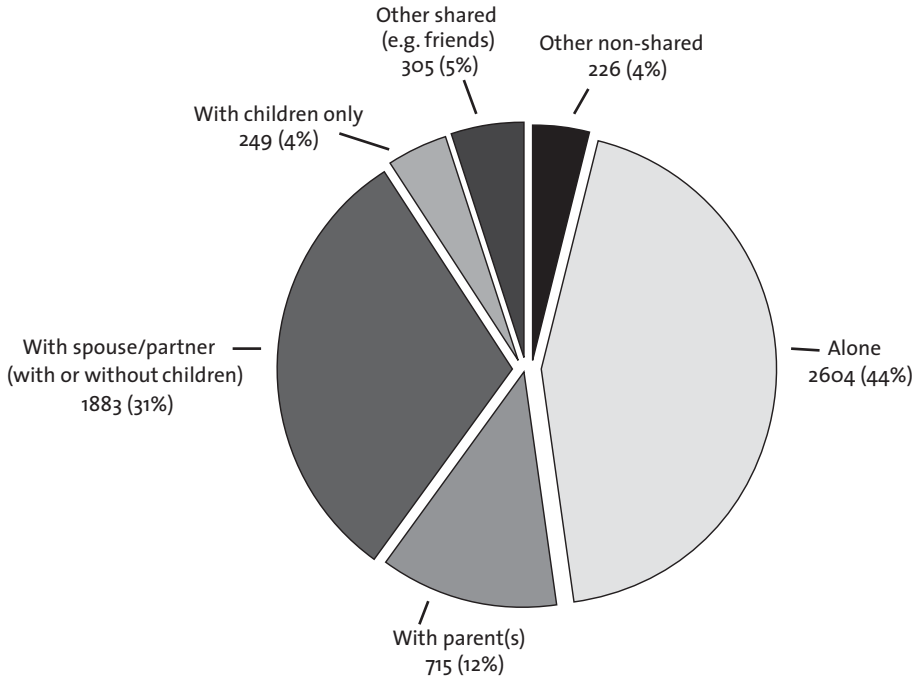


Figure 6: Employment status: Inquiry suicide cases



In the overall Inquiry sample, most were either unemployed (Figure 6) or on long-term sick leave (3,462 cases, 58%) but the rate of unemployment was particularly high in the under 35s in whom 977 (58%) were unemployed and 267 (16%) were on long-term sick leave.

Figure 7: Living circumstances: Inquiry suicide cases



Forty-four percent lived alone (Figure 7), but the figure was particularly high in those aged over 75 (160 cases, 58%). One hundred and thirty (2%) were homeless or of no fixed abode. Fifty-five (1%) were current prisoners. This group consisted of individuals dying by suicide in prison who had been under NHS mental health care in the previous year.

Behavioural characteristics

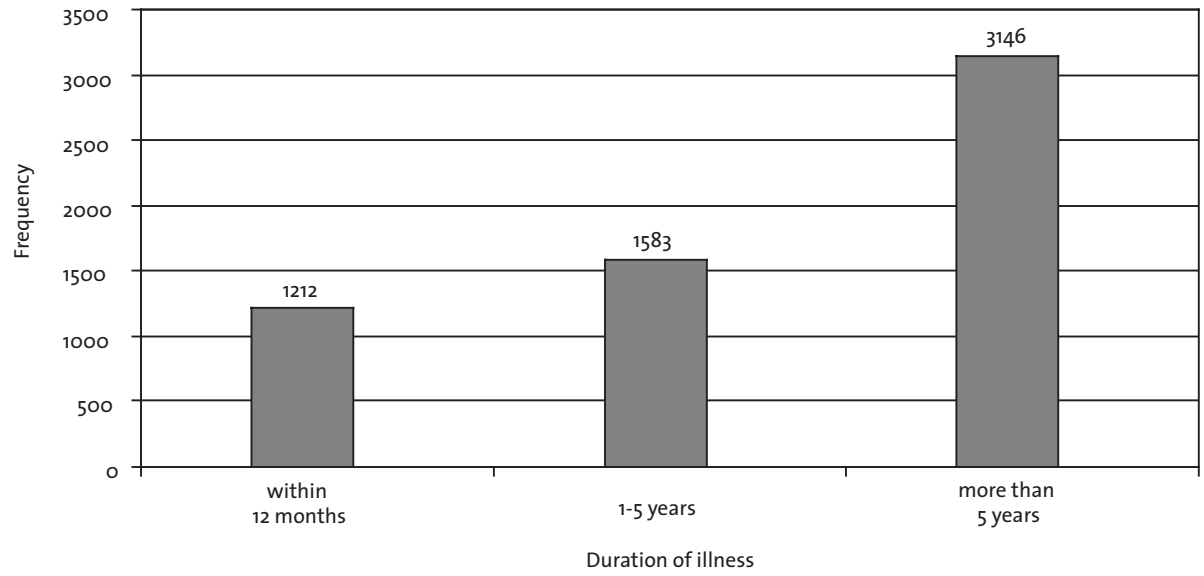
There were high rates of alcohol and drug misuse (Table 2); 21% of the sample were misusing both alcohol and drugs. Sixty-eight percent had a history of self-harm, a rise of 4% from the previous Inquiry report; 22% had a history of violence, a rise of 3% from the previous Inquiry report. There were between 642 and 892 Inquiry cases per year with a history of self-harm although there was no clear discernible trend. Rates of previous self-harm, violence and alcohol and drug misuse were higher in the younger age groups and in those with personality disorder or alcohol dependence. People with depression and anxiety had the lowest rates of previous violence.

Duration of illness

Deaths by suicide were relatively common in the first year after the onset of illness (Figure 8). Twenty percent occurred at this time but this figure was higher in the under 25s (100 cases, 22%) and over 65s (199 cases, 28%).

Overall the majority of this "early mortality" group were suffering from affective disorder (57%) and had lower rates of previous self-harm (61%), violence (11%), alcohol misuse (30%) and drug misuse (18%). Of the 94 cases with schizophrenia who died within a year of illness onset, 53 (57%) were not under enhanced CPA, an increase from the 33% not under enhanced CPA in the previous Inquiry report.

Figure 8: Duration of illness: Inquiry suicide cases



Multiple previous admissions

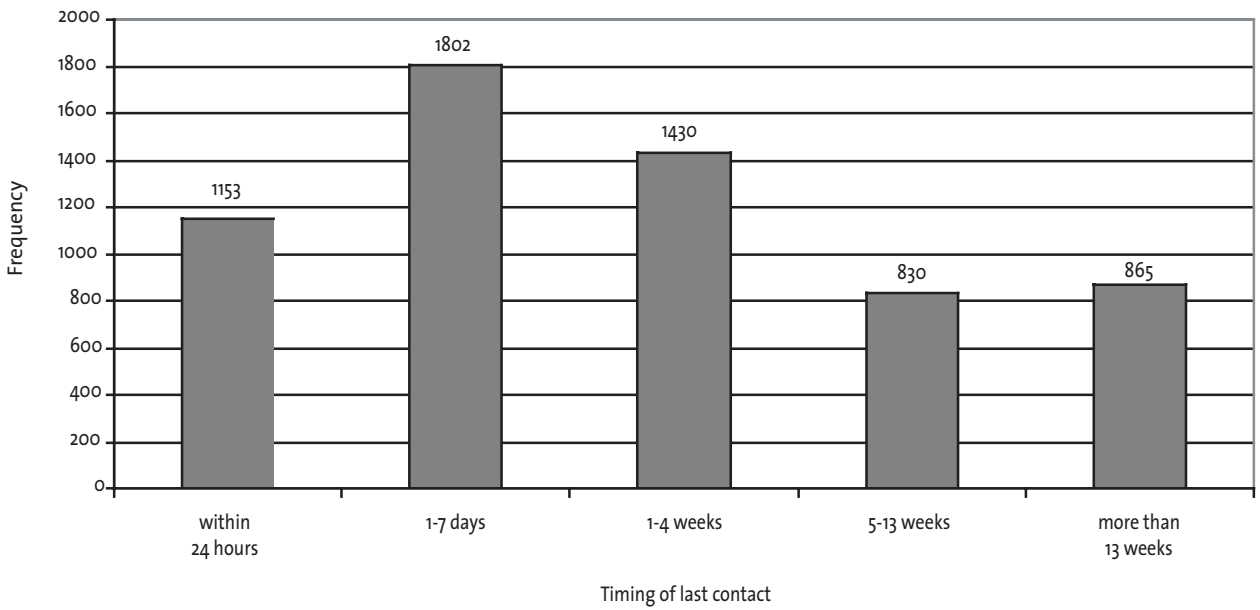
Twenty-seven percent (1,645 cases) of all Inquiry cases had never had an in-patient admission, while 15% (931 cases) had had more than five previous admissions. This "multiple admission" group was larger in those aged 35-64 years. People with multiple previous admissions showed features of more severe illness and more frequent indicators of risk. Compared to other Inquiry cases, they had higher rates of schizophrenia (316 cases, 34% v. 822 cases, 16%) and personality disorder (141 cases, 15% v. 375 cases, 7%). They were more likely to have a history of self-harm (761 cases, 83% v. 3,348 cases, 66%), violence (302 cases, 33% v. 983 cases, 19%), drug misuse (347 cases, 38% v. 1,433 cases, 28%) and alcohol misuse (460 cases, 50% v. 2,157 cases, 42%). They were more often single (706 cases, 76% v. 3,497 cases, 68%) and living alone (478 cases, 52% v. 2,110 cases, 42%) and unemployed or on long-term sick leave (709 cases, 77% v. 2,741 cases, 54%). They were more likely to be in-patients when the suicide occurred (238 cases, 26% v. 616 cases, 12%). Duration of history was strongly associated with the likelihood of admission. Only 17% (531 cases) of all cases had been ill for more than five years without being admitted, although this has increased from 7% in the previous Inquiry report.

Nature of last contact

One thousand one hundred and fifty-three cases (19%) were in contact with services in the 24 hours before death, 49% in the week before death (Figure 9). In 74% of cases the contact was routine rather than urgent – this was true even when the contact occurred within 24 hours of death (73%).

In 90%, this was a face-to-face contact, usually with a consultant (1,493 cases, 27%), junior psychiatrist (1,428 cases, 26%) or mental health nurse (1,156 cases, 21%). A key worker was present at the last contact in 59% of cases. Fifty-six percent took place at a hospital and 23% took place in the patient's home.

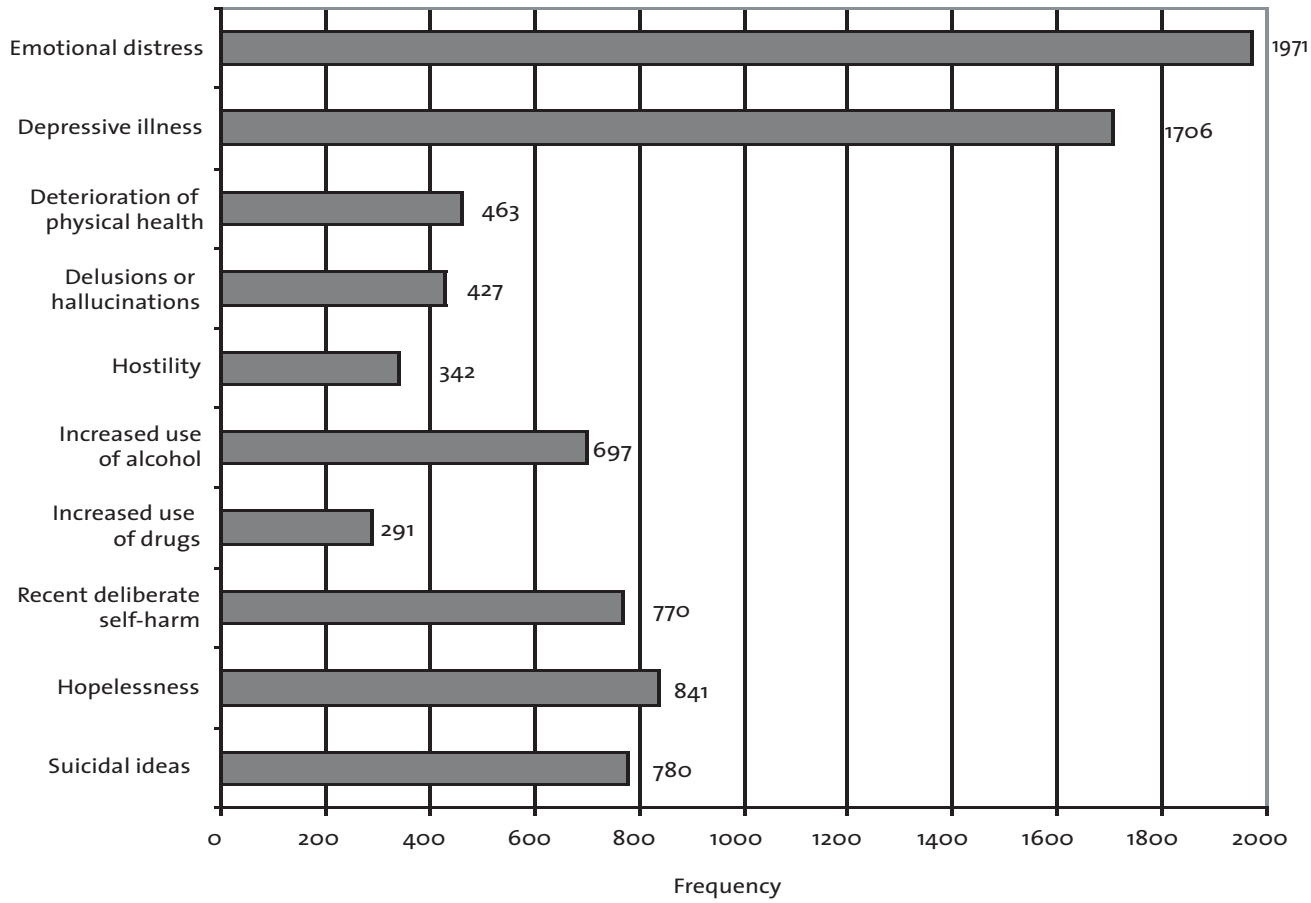
Figure 9: Timing of last contact with mental health services: Inquiry suicide cases



Symptoms at last contact

Assessment at the final contact with services revealed abnormalities of mental state or recent behaviour in 63% (3,759 cases) (Figure 10). Most commonly this was emotional distress (33%) or depressive illness (29%). Deterioration in physical health was associated with old age and was noted in 119 (17%) of suicide cases aged over 65, a decrease from the 23% reported in the previous Inquiry report.

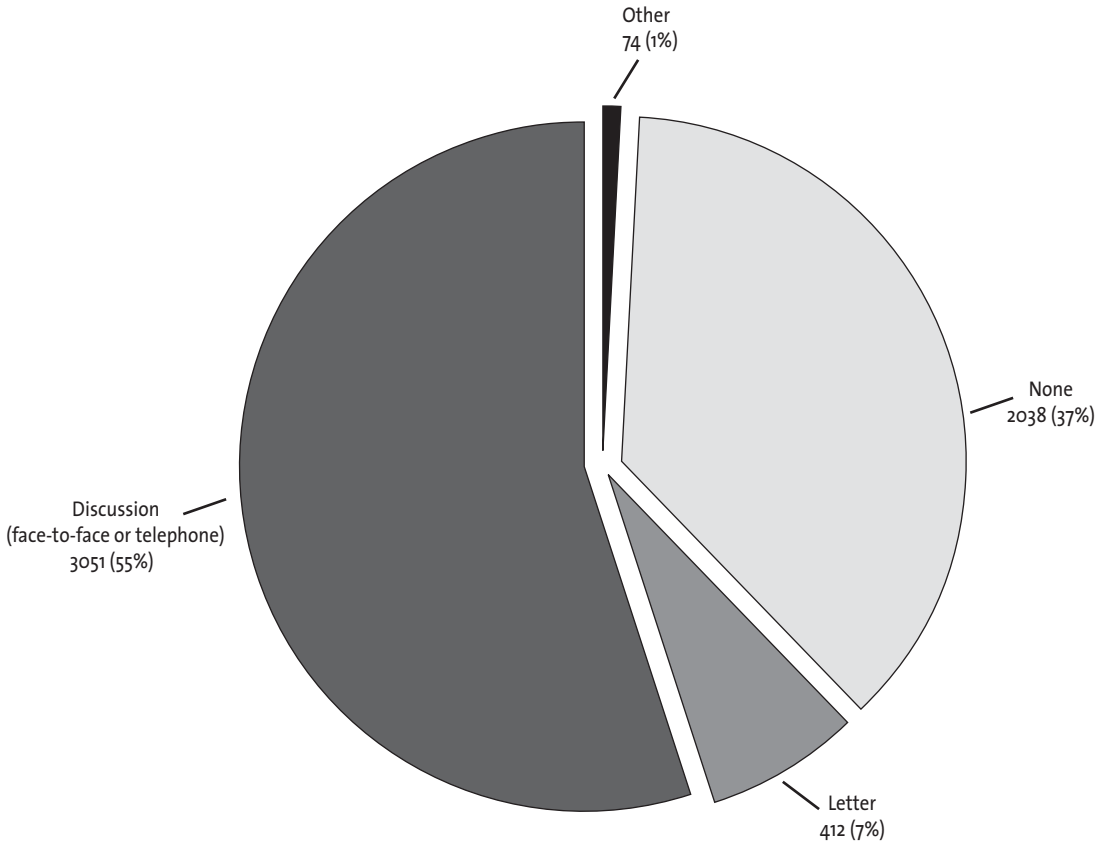
Figure 10: Symptoms at last contact with mental health services: Inquiry suicide cases



Contact with families

In 63% (3,537 cases), the mental health team had been in contact with the family of the deceased person following the death, usually face-to-face or by telephone (Figure 11), an increase from 58% in the previous Inquiry report. Sixty-six percent (3,795 cases) held a multidisciplinary review of the case, an increase from the previous Inquiry report (59%). Twenty-two percent (1,223 cases) held neither a review or had no contact with the family (a decrease from 28% in the previous Inquiry report).

Figure 11: Mental health team contact with relatives after Inquiry suicide case



Life events

Of 5,481 respondents, 46% detailed one or more adverse life event in the three months leading up to suicide. Of these, problems in relationships were common, occurring in half (49%). Ten percent of suicides were preceded by bereavement. Other frequently reported life events were accommodation problems (13%), health problems (12%) and workplace problems, including loss of job and unemployment (11%). In the under 25s who had reported adverse life events (167 cases), the most frequently reported were relationship break up (20%), legal problems (18%), family/childcare problems (17%) and accommodation problems (15%). In the over 65's who had reported adverse life events (261 cases), the most frequently reported were a physical health problem in the patient (38%), bereavement or anniversary of bereavement (20%), health problems in someone else (11%) and accommodation problems (12%).

Sub-groups

Suicides after Local Authority Care (under 25 year olds only)

Fifty cases of suicide occurred in those aged under 25 years who had been under Local Authority Care (12% of those aged under 25; 1% of the total sample). Personality disorder was the primary diagnosis in 35%. Seven (15%) had schizophrenia. Forty cases (82%) had a history of self-harm. Respondents viewed these deaths as preventable in 28% of cases.

Lone carers of children

Two hundred and forty-nine cases (4% of the total sample) were the lone carers of children (Figure 7). This group was predominantly female (73%), although the characteristics of males and females were similar. Fifty-four percent of lone carers were suffering from affective disorder, 12% had schizophrenia, and 15% had more than five previous admissions to an in-patient psychiatric unit. In the 95 patients (43%) who experienced adverse life events in the three months before suicide, family-related events – separation, divorce or family problems – were the most common.

Providing care for children under 5 years old

Three hundred and thirty-seven cases (6% of the total sample) were providing care for children under the age of 5 years. This group had higher rates of violence, alcohol and drug misuse but not self-harm. They were less likely to have severe mental illness (170 cases, 52%) and more likely to have a primary diagnosis of alcohol or drug dependence (36 cases, 11% and 26 cases, 8% respectively). Sixty percent also had a secondary diagnosis, most often personality disorder (40 cases, 20%). Clinical characteristics included a short history of illness, fewer previous admissions and a short (less than 7 days) last admission. Fewer had been allocated a care co-ordinator (145 cases, 54%) or had a follow-up appointment arranged (150 cases, 89%). Rates of adverse life events in the 3 months prior to death were higher than for the total sample (197 cases, 67% v. 2,027 cases, 44%), most often involving relationship difficulties (49%).

People aged over 65

There were 740 suicides among people over 65 years, 12% of the total sample. No further break down by age was carried out as few clinical differences were observed when comparing those aged 74-85 and those over 85. Key characteristics of this group are presented in Table 4.

There were a higher proportion of women in the over 65 age group (326 cases, 44% v. 1,770 cases, 32%) and they were more often white (692 cases, 95% v. 4, 947 cases, 93%) and married (287 cases, 39% v. 1,578 cases, 29%) compared to those aged 65 and under. The most common methods of suicide were hanging/strangulation (30%) and self-poisoning (28%) while 15% died by drowning. Sixty-eight percent were suffering from affective disorder. Compared to younger suicide cases, they had low rates of previous self-harm (392 cases, 54% v. 3,732 cases, 70%), violence (31 cases, 4% v. 1,260 cases, 24%), alcohol (109 cases, 15% v. 2,522 cases, 47%) and drug misuse (29 cases, 4% v. 1,760 cases, 33%). Twenty-eight percent had been ill for less than a year and fewer had a co-morbid psychiatric condition compared to younger suicide cases.

Fewer elderly suicide cases were under the higher levels of the enhanced CPA (203 cases, 28% v. 1,915 cases, 36%), had missed their last appointment (92 cases, 14% v. 1,431 cases, 31%) or were non-compliant with medication (80 cases, 11% v. 733 cases, 15%) and they were more likely to have had contact with services in the week prior to suicide. Of the 261 cases (37%) who reported adverse life events in the three months before death, the most common were physical health problems (38%), relationship problems (22%) and bereavement (20%). At last contact, elderly suicide cases were more likely to show deterioration in physical health (119 cases, 17% v. 344 cases, 7%) and evidence of depressive illness (252 cases, 35% v. 1,454 cases, 28%) compared to younger cases of suicide. Physical health problems were most common in the oldest age group (85 years and over) (19 cases, 28%).

Table 4: Social and clinical characteristics of Inquiry suicide cases aged over 65 years

	Number (740)	%	(95% CI)
Demographic features			
Male	414	56	(52-60)
Ethnic minority	35	5	(3-7)
Not currently married	446	61	(57-64)
Living alone	356	49	(45-53)
Priority groups			
In-patients	94	13	(10-15)
Post-discharge patients	133	21	(18-24)
Under enhanced CPA	203	28	(25-31)
Missed last contact	92	14	(12-17)
Non-compliance in the last month	80	11	(9-14)

(continued overleaf)

Table 4: Social and clinical characteristics of Inquiry suicide cases aged over 65 years (continued)

	Number (740)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	45	6	(5-8)
Affective disorder (bipolar disorder and depression)	496	68	(65-72)
Alcohol dependence	18	2	(1-4)
Drug dependence	0	-	-
Personality disorder	13	2	(1-3)
Any secondary diagnosis	268	37	(33-40)
Duration of history (under 12 months)	199	28	(24-31)
Over 5 previous admissions	85	12	(9-14)
Last admission was a re-admission	52	12	(9-16)

(continued overleaf)

Table 4: Social and clinical characteristics of Inquiry suicide cases aged over 65 years (continued)

	Number (740)	%	(95% CI)
Behavioural features			
History of self-harm	392	54	(50-58)
History of violence	31	4	(3-6)
History of alcohol misuse	109	15	(12-18)
History of drug misuse	29	4	(3-6)
Contact with services			
Last contact within 7 days of death	395	54	(51-58)
Symptoms at last contact	433	60	(57-64)
Estimate of immediate risk: low or none	639	92	(89-94)
Estimate of long-term risk: low or none	453	66	(62-70)
Suicide thought to be preventable	104	16	(13-19)

Ethnic minority groups

The sample included 423 individuals (7%) from an ethnic minority (Table 2). Ethnic minorities constitute 8% of the general population; overall these groups were not under- or over-represented in our sample (Figure 12).

The key characteristics of suicides among ethnic minority patients are shown in Table 5. The findings may reflect the features of ethnic minority patients in general and may not be specific to suicide. However, they show the characteristics of the suicides that services would have to prevent to lower the suicide rate in this group.

Figure 12: Ethnic origin (not including white): Inquiry suicide cases

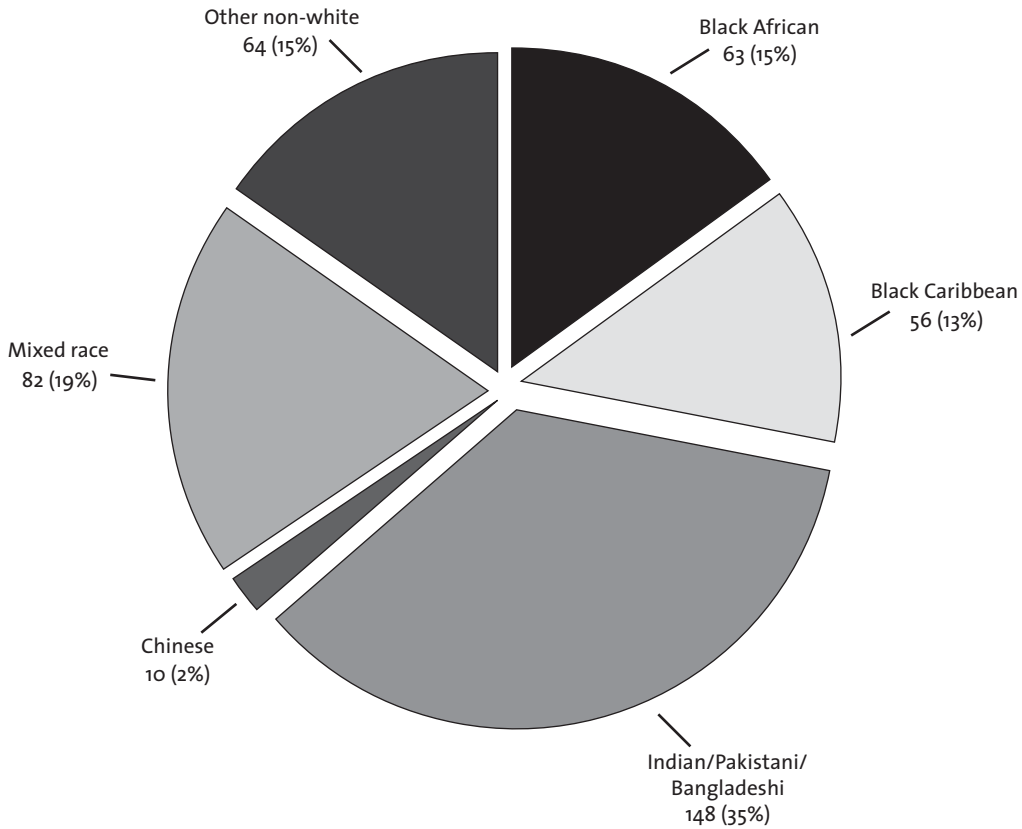


Table 5: Social and clinical characteristics of suicides by ethnic minority Inquiry cases

	Number (423)	%	(95% CI)
Demographic features			
Age: median (range)	37 (16-88)	-	-
Male	279	66	(61-70)
Not currently married	302	72	(68-76)
Unemployed	199	48	(43-53)
Long-term sick	63	15	(12-19)
Living alone	163	40	(35-45)
Priority groups			
In-patients	67	16	(12-20)
Post-discharge patients	70	20	(16-24)
Under enhanced CPA	206	49	(44-54)
Missed last contact	116	33	(28-39)
Non-compliance in the last month	64	16	(13-20)

(continued overleaf)

Table 5: Social and clinical characteristics of suicides by ethnic minority Inquiry cases (continued)

	Number (423)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	170	41	(36-46)
Affective disorder (bipolar disorder and depression)	151	36	(32-41)
Alcohol dependence	20	5	(3-7)
Drug dependence	5	1	(0-3)
Personality disorder	32	8	(5-11)
Any secondary diagnosis	202	48	(44-53)
Duration of history (under 12 months)	60	14	(11-18)
Over 5 previous admissions	72	17	(14-21)
Last admission was a re-admission	34	13	(10-18)

(continued overleaf)

Table 5: Social and clinical characteristics of suicides by ethnic minority Inquiry cases (continued)

	Number (423)	%	(95% CI)
Behavioural features			
History of self-harm	227	55	(50-60)
History of violence	117	28	(24-33)
History of alcohol misuse	125	30	(26-35)
History of drug misuse	146	35	(30-40)
Contact with services			
Last contact within 7 days of death	207	50	(45-55)
Symptoms at last contact	226	56	(51-61)
Estimate of immediate risk: low or none	357	89	(86-92)
Estimate of long-term risk: low or none	248	63	(58-68)
Suicide thought to be preventable	83	22	(18-27)

Compared to white suicides, ethnic minority suicides as a whole were more likely to be unemployed (199 cases, 48% v. 2,136, 39%). There was a much higher proportion of people from an ethnic minority group suffering from schizophrenia compared to white cases of suicide (170 cases, 41% v. 956 cases, 17%) and significantly fewer with a diagnosis of affective disorder (151 cases, 36% v. 2,622 cases, 47%) or drug (5 cases, 1% v. 195 cases, 3%) or alcohol dependence (20 cases, 5% v. 457 cases, 8%). Rates of previous violence (117 cases, 28% v. 1,147 cases, 21%) and drug misuse (146 cases, 35% v. 1,604 cases, 29%) were higher compared to white cases. Ethnic minority suicides were less likely to have previously self-harmed (227 cases, 55% v. 3,811, 69%) or have a history of alcohol misuse than white cases (125 cases, 30% v. 2,443 cases, 44%).

Ethnic minority suicides were less likely to die by self-poisoning than cases of white suicide (21% and 28% respectively) and more likely to die by jumping/multiple injuries (23% and 14%) or by burning (3% and 2%). Whilst a similar proportion of ethnic minority and white suicides were non-compliant with medication (16% and 14% respectively), distressing side-effects of medication were more common in ethnic minority suicides (11% v. 7% of white suicides). The reason for non-compliance was usually thought by staff to be lack of insight.

The numbers in the different ethnic groups were: south Asian (i.e. from the Indian sub-continent) 148, mixed race 82, black African 63, black Caribbean 56. Although the numbers were relatively small for comparison, differences between these groups were evident.

Black Caribbean suicides were more likely to be unmarried (48 cases, 86% v. 254 cases, 70% of other ethnic groups). They were particularly likely to suffer from schizophrenia (37 cases, 67% v. 133 cases, 37%) and they had high rates of violence (30 cases, 55% v. 87 cases, 24%) and previous drug misuse (29 cases, 53% v. 117 cases, 32%).

Asian suicides were less likely to be living alone (31 cases, 22% v. 132 cases, 49%) and to have a history of self-harm (70 cases, 48% v. 157 cases, 59%), violence (30 cases, 21% v. 87 cases, 32%) and drug misuse (33 cases, 22% v. 113 cases, 42%). Asian suicides were more likely to have a diagnosis of affective disorder (74 cases, 50% v. 77 cases, 29%).

Black African suicides were more likely to be unmarried (58 cases, 92% v. 244 cases, 69% of other ethnic groups), to live alone (41 cases, 66% v. 122 cases, 35%) and be unemployed (43 cases, 70% v. 156 cases, 44%). They had higher rates of schizophrenia (37 cases, 60% v. 133 cases, 37%).

Mixed race suicides were younger and unmarried (67 cases, 84% v. 235 cases, 69% of other ethnic groups). They had higher rates of personality disorder (17 cases, 22% v. 15 cases, 4%), a history of self-harm (56 cases, 70% v. 171 cases, 52%), alcohol misuse (38 cases, 50% v. 87 cases, 26%) and drug misuse (48 cases, 61% v. 98 cases, 29%).

There were no differences between ethnic minority groups in terms of immediate risk. Long-term risk was less likely to be viewed as high in Asian suicides (41 cases, 29% v. 105 cases, 42% of other ethnic suicides). Long-term risk was more likely to be viewed as high in mixed race suicides (36 cases, 47% v. 110 cases, 35% of other ethnic suicides). Services did not view suicide as more or less preventable in any ethnic minority group.

Homeless

There were 130 suicides among homeless people, 2% of the Inquiry sample. This compares with 131 (3%) in the previous Inquiry report. The homeless suicide cases were mainly young (median age 34.5; inter-quartile range 15 to 73 v. 44; 10 to 95), single (121 cases, 95%), unemployed (104 cases, 83%) and male (111 cases, 85%). They had a different diagnostic profile from other Inquiry cases as a whole, the most common primary diagnoses being affective disorder (19%), schizophrenia (18%), personality disorder (17%) and alcohol dependence (14%). Eighty-four percent had been ill for more than a year and 25% had more than five admissions. Compared to other Inquiry cases, they had high rates of co-morbidity, alcohol and drug misuse and violence.

The most common method of suicide was hanging/strangulation (38%), followed by self-poisoning (25%).

Twenty-seven percent (35 cases) were in-patients at the time of suicide and 41% (39 cases) died within three months of hospital discharge. Twenty-six percent (32 cases) were under the higher levels of the CPA.

More homeless suicide cases were judged to be at moderate or high long-term risk compared to the non-homeless (63 cases, 53% v. 2,198 cases, 41%). In 24% suicide was thought to have been preventable, although this is not significantly different to the rest of the Inquiry suicide population as a whole. At last contact, homeless suicides were more likely to show hostility (21 cases, 17%), emotional distress (57 cases, 46%), evidence of increased use of alcohol (26 cases, 21%) or drugs (16 cases, 13%) or recent self-harm (29 cases, 24%).

Homeless suicide cases were no more likely to be non-compliant with treatment in the month before death than non-homeless suicide cases. (18 cases, 16% and 783 cases, 15% respectively). They were more likely to miss their final appointment in the community (33 cases, 37%) although this did not differ significantly from the general Inquiry population. Among the group who missed their final appointment, there had been a recent assertive attempt to re-engage the patient with services in 68% of cases, an increase from 50% in the previous Inquiry report. Among the homeless group who were non-compliant in the month before death, there was a face-to-face attempt to encourage compliance in 53% of cases.

Psychiatric diagnoses

The primary diagnoses for Inquiry cases are listed in Table 2. Social and clinical characteristics varied according to primary diagnosis.

Cases of suicide with a primary diagnosis of schizophrenia (1,145 cases) were more likely to have a history of violence (33%) and drug misuse (44%) than the other diagnostic groups. Only 8% of people with schizophrenia were in their first year of illness and they were more likely to be in-patients at the time of death (260 cases, 23% v. 593 cases, 12%). Rates of reported non-compliance with medication were higher (22%) than for other diagnostic groups. For those who were in-patients, 45% had been detained under the Mental Health Act at admission.

Cases of suicide with affective disorder (2,821 cases) were more likely to have taken place in the first year of illness (25%) compared to other diagnostic groups and they were more likely to report symptoms of mental illness at last contact with services (68%). Respondents were more likely to view suicides in those with affective disorder as preventable (520 cases, 20% v. 485 cases, 17%).

The majority of individuals with a primary diagnosis of alcohol (491 cases) or drug dependence (206 cases) were unemployed (279 cases, 60% and 150 cases, 80% respectively) and had high rates of co-morbidity (335 cases, 68% and 136 cases, 66% respectively). They were also more likely to be homeless compared to those with severe mental illness (schizophrenia or affective disorder). Proportionally more had missed their final appointment (45%) and they were more likely to have discharged themselves compared to other suicide cases. Services were less likely to arrange follow-up appointments or attempt re-engagement with these patients.

People with a primary diagnosis of personality disorder (518 cases) had the highest rates of self-harm (91%), previous violence (43%), alcohol (67%) and drug misuse (54%). Rates of unemployment were high among this group (61%). Seventy-four percent of people with personality disorder had a secondary diagnosis. Death by suicide within 3 months of discharge from hospital was common (31%).

Method of suicide differed by diagnostic group. There was a high rate of suicide by jumping/multiple injuries in people with schizophrenia (25%).

Those with a primary diagnosis of alcohol or drug dependence were most likely to use self-poisoning (37% in both diagnostic groups). The highest rate of hanging/strangulation was in those with drug dependence (44%) and affective disorder (38%).

There were substantial differences in diagnosis by age group. Of the 467 cases of suicide aged under 25, 132 cases (29%) were suffering from schizophrenia, while almost a quarter had a primary diagnosis of affective disorder (109 cases, 24%) and almost a fifth had a primary diagnosis of personality disorder (80 cases, 18%). Both schizophrenia and personality disorder decreased proportionally with increasing age, though the highest numbers in both cases were in the 25-34 year olds. In contrast, the proportion of suicides with affective disorder increased with age.

Fifty-four percent (3,298 cases) of Inquiry cases had at least one secondary diagnosis. The most common secondary diagnoses were depressive illness, personality disorder, alcohol dependence and anxiety disorders. The rate of co-morbidity was highest in the younger age groups.

Dual diagnosis

There were 1,659 suicides among those with severe mental illness (schizophrenia or affective disorder) and alcohol or drug dependence/misuse, 27% of the Inquiry sample (Table 6); this is an increase from the previous Inquiry report (23%). These suicides were mainly young, single, unemployed, males and living alone.
The most common methods of suicide were hanging/strangulation (35%) and self-poisoning (30%). Compared to all Inquiry cases, patients with dual diagnosis had high rates of previous violence and self-harm. Eighty-five percent had been ill for more than a year and 21% had more than five previous admissions. Dual diagnosis suicides were more likely than those without this condition to be in-patients at the time of death (293 cases, 18%) and to be under enhanced CPA (780 cases, 48%), non-compliant with medication (311 cases, 20%) and to have reported distressing side-effects (137 cases, 9%). Of those that died living in the community (1,366 cases) four hundred and thirty-one (32%) had missed their last appointment with services.

Table 6: Social and clinical characteristics of Inquiry suicide cases with dual diagnosis (severe mental illness & alcohol or drug dependence/misuse)

	Number (1,659)	%	(95% CI)
Demographic features			
Age: median (range)	39 (14-93)	-	-
Male	1,248	75	(73-77)
Ethnic minority	124	8	(6-9)
Not currently married	1,288	78	(76-80)
Unemployed	772	48	(45-50)
Long-term sick	387	24	(22-26)
Living alone	743	46	(44-48)
Homeless	30	2	(1-3)
Priority groups			
In-patient	293	18	(16-20)
Post-discharge patients	322	24	(21-26)
Under enhanced CPA	780	48	(45-50)
Missed last contact	431	32	(30-35)
Non-compliance in the last month	311	20	(18-22)

(continued overleaf)

Table 6: Social and clinical characteristics of Inquiry suicide cases with dual diagnosis (severe mental illness & alcohol or drug dependence/misuse) (continued)

	Number (1,659)	%	(95% CI)
Method			
Hanging/strangulation	582	35	(33-37)
Self-poisoning	500	30	(28-32)
Carbon monoxide poisoning	61	4	(3-5)
Jumping/multiple injuries	282	17	(15-19)
Other	232	14	(12-16)
Behavioural features			
History of self-harm	1,177	72	(70-75)
History of violence	493	30	(28-33)
History of alcohol misuse	1,319	81	(79-82)
History of drug misuse	923	56	(54-59)

(continued overleaf)

Table 6: Social and clinical characteristics of Inquiry suicide cases with dual diagnosis (severe mental illness & alcohol or drug dependence/misuse) (continued)

	Number (1,659)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia and other delusional disorders	648	39	(37-41)
Affective disorder (bipolar disorder and depression)	1,011	61	(59-63)
Duration of history (under 12 months)	243	15	(13-17)
Over 5 previous admissions	345	21	(19-23)
Last admission was a readmission	172	16	(14-19)
Last contact with services within 7 days of death	879	54	(51-56)
Symptoms at last contact	993	62	(60-65)
Estimate of immediate risk: low or none	1,344	86	(84-88)
Estimate of long-term risk: low or none	881	57	(55-60)
Suicide thought to be preventable	290	19	(17-22)
Detained under MHA at last admission	257	19	(17-21)
Duration of last admission less than 7 days	170	16	(14-19)
Patient-initiated discharge	165	16	(14-18)
Care co-ordinator allocated	991	76	(74-79)
Follow-up arranged	939	96	(95-97)

3.3. Are wards becoming safer?

There were 856 in-patient suicides reported during the study period, 14% of Inquiry cases. The number of notifications of in-patient suicides expressed as a proportion of all Inquiry cases declined steadily from 16% in 2000 to 11% in 2004. Their key characteristics are given in (Table 7).

Social and clinical characteristics

In-patient suicides were similar to the Inquiry sample as a whole although they were more likely to be homeless and less likely to be living alone.

In-patient suicides were a more morbid group than the sample as a whole. For example, 30% had schizophrenia and they had higher rates of previous self-harm, violence and multiple previous admissions. Twelve percent of in-patient suicides were reportedly non-compliant with medication in the month before death, a decrease from 26% in the previous Inquiry report.

Table 7: Characteristics of Inquiry in-patient suicide cases

	Number (856)	%	(95% CI)
Demographic features			
Age: median (range)	43 (15-95)	-	-
Male	544	64	(60-67)
Ethnic minority	67	8	(6-10)
Not currently married	595	70	(66-73)
Unemployed	350	41	(38-45)
Long-term sick	160	19	(16-22)
Living alone	337	40	(37-43)
Homeless	35	4	(3-6)

(continued overleaf)

Table 7: Characteristics of Inquiry in-patient suicide cases (continued)

	Number (856)	%	(95% CI)
Method			
Hanging/strangulation	377	44	(41-47)
Self-poisoning	81	9	(8-12)
Carbon monoxide poisoning	14	2	(1-3)
Jumping/multiple injuries	215	25	(22-28)
Drowning	81	9	(8-12)
Other	88	10	(8-13)
Priority groups			
Under enhanced CPA	531	64	(61-67)
Non-compliance in the last month	100	12	(10-14)
Behavioural features			
History of self-harm	638	76	(73-79)
History of violence	217	26	(23-29)
History of alcohol misuse	289	34	(31-38)
History of drug misuse	240	28	(25-32)

(continued overleaf)

Table 7: Characteristics of Inquiry in-patient suicide cases (continued)

	Number (856)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	260	30	(27-34)
Affective disorder (bipolar disorder and depression)	450	53	(49-56)
Alcohol dependence	14	2	(1-3)
Drug dependence	4	1	(0-1)
Personality disorder	76	9	(7-11)
Any secondary diagnosis	409	48	(45-51)
Duration of history (under 12 months)	182	21	(19-24)
Over 5 previous admissions	238	28	(25-31)

(continued overleaf)

Table 7: Characteristics of Inquiry in-patient suicide cases (continued)

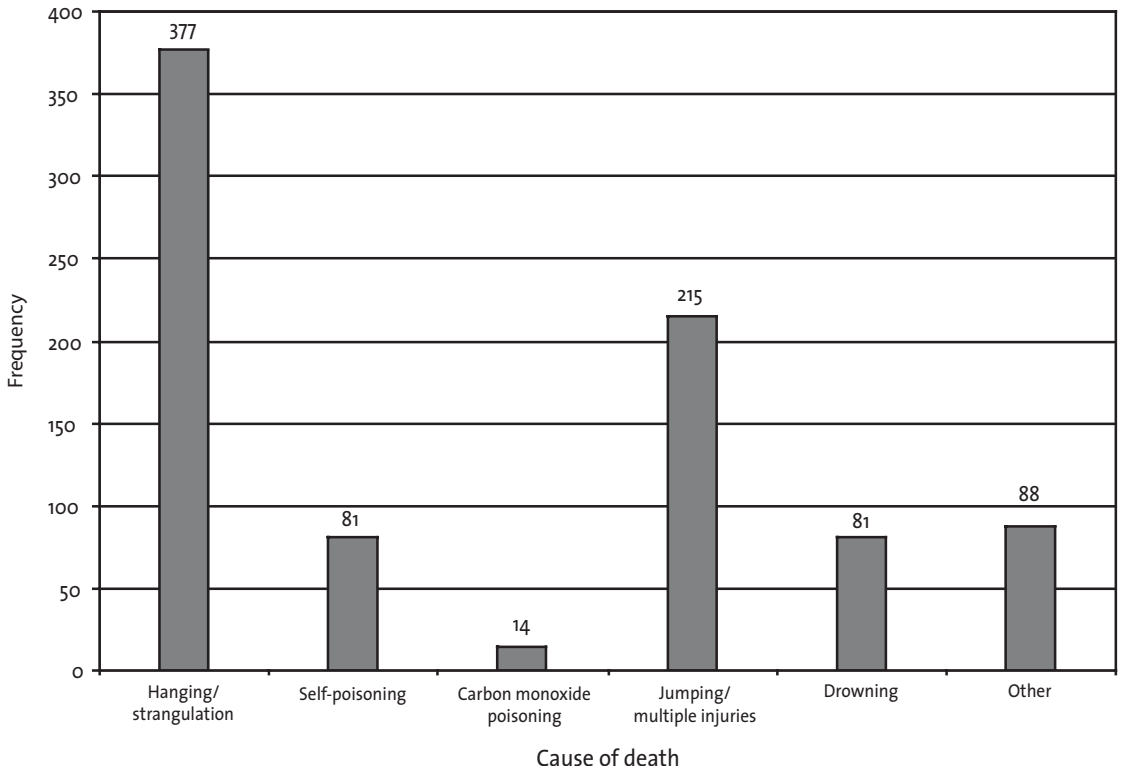
	Number (856)	%	(95% CI)
Admission features			
Died within first week of admission	117	15	(13-18)
Died whilst under the care of a local in-patient unit†	510	72	(68-75)
Died on the ward	251	29	(26-33)
Suicide during period of planning discharge	292	35	(31-38)
Detained under MHA	206	24	(21-27)
Observation problems with ward design	123	16	(13-18)
Observation problems with other patients	50	6	(5-8)
Contact with services			
Symptoms at last contact	514	62	(59-65)
Estimate of immediate risk: low or none	667	81	(78-83)
Estimate of long-term risk: low or none	402	49	(46-53)
Suicide thought to be preventable	223	28	(25-31)

†Data were only available for 713 cases for this variable.

Causes of death

The suicide methods used by in-patients were different from those of the Inquiry sample as a whole (Figure 13). By far the most common method was hanging/strangulation (44%), followed by jumping/multiple injuries (25%). Self-poisioning was less frequent (9%); the type of substance taken was most commonly a psychotropic drug (32 cases, 41%). Jumping from a height or in front of a vehicle generally took place outside hospital grounds, usually distant from the hospital. Of those that occurred on the ward itself (251 cases), 75% were by hanging/ strangulation (hanging: 186 cases, 74%; strangulation: 2 cases, 1%) while 7% were by self-poisoning and 8% were by suffocation.

Figure 13: In-patient suicides: methods



SELF-POISIONING	
Psychotropic drug	32
Paracetamol	7
Opiate	14
Other analgesic	16
Other	9
Unknown	3
TOTAL	**81**

OTHER	
Burning	23
Cutting/stabbing	25
Suffocation	24
Firearms	4
Electrocution	2
Other	10
TOTAL	**88**

Suicide by hanging/strangulation

Of the 188 hanging/strangulation cases that took place on the ward (Table 8), the most commonly used ligature was a belt (82 cases, 45%) and the most commonly used ligature point was a hook or a handle (42 cases, 23%). These in-patient suicides were more likely to have a history of alcohol misuse (76 cases, 42% v. 57 cases, 31% of other in-patient suicides) and violence (58 cases, 32% v. 39 cases, 21%) and to have a primary diagnosis of personality disorder (33 cases, 18% v. 9 cases, 5%). Sixty-three cases (34%) had been detained under the Mental Health Act. They were more likely to die within the first week of admission than other in-patient suicide cases. Fifty percent were under medium or high levels of observation and immediate risk was more often perceived as moderate or high (54 cases, 30% v. 25 cases, 14%). In 29% of these cases, there were problems in observation due to ward design or other disturbed patients. Respondents more commonly viewed these deaths as preventable compared to other in-patient suicides.

Previous guidance issued by the Department of Health required the removal of non-collapsible curtain rails on in-patient wards by 1 April 2002 (24). The Inquiry was notified of three deaths using a non-collapsible rail after the 1 April 2002 implementation deadline. The three trusts in which these deaths occurred were alerted and the Department of Health subsequently issued further guidance to all trusts through hospital estates departments.

Table 8: In-patient suicides: ligatures and ligature points for cases of hanging/strangulation on the ward

	Number (188)	%
Ligature type		
Belt	82	45
Sheet, towel, etc	29	16
Shoelaces	18	10
Clothing (tie, scarf, tights, etc)	19	10
Item brought in specifically (e.g. rope)	4	2
Other specified (e.g. cable cord, curtains)	29	16
Ligature point		
Hook or handle	42	23
Door	32	18
Window	23	13
Bed head	18	10
Other rail (e.g. toilet rail, wardrobe rail)	10	6
Pipes	9	5
Shower fixtures (e.g. shower head, tap)	8	4
Bed curtain rail	6	3
Other specified (e.g. light fixture, radiator)	33	18

Timing, location and care

One hundred and seventeen suicides (15%) took place in the first week after admission, fewer than in the previous Inquiry report (24%). A third (292 cases, 35%) occurred during the period when discharge was being planned, a decrease from 41% in the previous Inquiry report. There was no characteristic time of the day when in-patient suicides occurred and overall there was no evidence of clustering "out of hours". However, suicides that occurred on the ward itself followed a different pattern from those that occurred elsewhere, being more common in the evening and night (41%). Of those who died in the first week after admission, 38 cases (32%) had absconded from the ward.

Two hundred and fifty-one (29%) cases of suicide occurred on the ward itself, 57% took place at a distance from the hospital, while 13% occurred in or around the hospital (the remaining 1% occurred at an unspecified location). In suicides that occurred off the ward, 62% of patients were on agreed leave or had left with staff agreement, but 38% had left without staff agreement.

Thirty-two cases (4%) died on a psychiatric intensive care ward, while 22 cases (3%) died on a ward in a secure unit. Six cases (1%) died in a high secure hospital while 44 cases (5%) died on a rehabilitation unit. Sixty cases (7%) died on other wards (e.g. challenging behaviour unit; crisis bed at day hospital; old age psychiatry open ward; private specialist unit; psychogeriatric open ward).

The majority of patients were under routine care at the time of the suicide, being voluntary patients (648 cases), on an open ward (669 cases) and under routine observation (361 cases). However, 206 (24%) were detained under the Mental Health Act and 60 (7%) were on a locked ward. Twenty-two percent of patients (185 cases) were under special (i.e. non-routine) observation, similar to the 23% in the previous Inquiry report. Of those who died on the ward, 48% (117 cases) were under special observation.

In this report sample, 18 cases (3%) were under one-to-one observation. The number of deaths under observation has not fallen since 1997, which means that they have increased as a proportion of in-patient suicides (Table 9).

One hundred and twenty-three (16%) respondents reported problems observing patients because of ward design, a decrease from the 25% in the previous Inquiry report. Fifty (6%) reported problems observing the patients because of the needs of other disturbed patients. In general, these problems were more frequent (13%) in suicides occurring during special observation.

As in the sample as a whole, the majority of patients (667 cases, 81%) were thought to be at low or no immediate risk at last contact.

Of the 185 patients who died by suicide while under special or constant observation, 64% of deaths occurred on the ward itself, an increase from 52% in the previous Inquiry report. Thirty-six percent had left the ward at the time of suicide, including 16% who had left with staff agreement. This was a substantial decrease from the previous Inquiry report when 48% had left the ward at the time of death. In 21% there were problems observing patients on the ward because of ward design and in 13% because of the needs of other disturbed patients.

Cases of suicide under special observation were more often seen as preventable (45%) than in-patient suicides in general and 64% of respondents thought risk of death would have been reduced by closer supervision. When these suicides occurred on the ward, they were usually by hanging/ strangulation (78%), while 6% were by suffocation, 5% by self-poisoning, 4% by jumping from a height, 3% by burning and 2% by cutting or stabbing. Cases of suicide under observation did not cluster "out of hours." Cases of suicide under one-to-one observation were most often by jumping/ multiple injuries and hanging/strangulation.

Table 9: In-patient suicides: level of patient observation and care

Year	Medium Number (%)	One-to-One Number (%)	Total Number (%)
1997	35 (18)	5 (3)	40 (21)
1998	27 (18)	3 (2)	30 (20)
1999	54 (37)	6 (4)	60 (41)
2000	41 (29)	2 (1)	43 (30)
2001	41 (29)	5 (3)	46 (32)
2002	36 (31)	3 (3)	39 (34)
2003	35 (33)	4 (4)	39 (36)
2004	31 (34)	4 (4)	35 (39)

Risk and preventability

In-patient suicides were more often seen as preventable (223 cases, 28%) than Inquiry cases as a whole and the respondents most often suggested closer supervision (40%) as the factor that would have made suicide less likely. Better patient compliance was mentioned by 16%. However, staff factors were also mentioned frequently: better staff training (20%), increased staff numbers (19%) and better staff communication (20%). Closer contact with the patient's family was mentioned by 13% of respondents. Five hundred and sixty-four respondents (68%) mentioned any factor which could have prevented suicide.

One group of individuals whose deaths were more often regarded as preventable were those who died after absconding (227 cases). Those who had left the ward without staff permission at the time of suicide had different characteristics to those who were off the ward with staff agreement (Table 10). They were more likely to be young, unemployed and homeless. Death was most often by jumping/multiple injuries; the majority died away from the hospital grounds (71%). There were high rates of schizophrenia, previous violence and alcohol and drug misuse. Just under one fifth were non-compliant with medication. This group was more likely to have shown symptoms of mental illness at last contact compared to those who were off the ward with permission and to be under moderate or high observation. Cases of suicide who had absconded were more likely to be viewed as preventable than those who were off the ward with permission (67 cases, 32% v. 75 cases, 21%).

Table 10: In-patient suicides: comparison of characteristics between absconders, in-patients who die on the ward and all other in-patients

	On ward Number (251)	%	Off ward without permission Number (227)	%	Off ward with permission (including leave) Number (378)	%
Demographic features						
Age: median (range)	40 (18-90)		39 (17-75)		46.5 (15-95)	
Male	145	58	152	67	247	65
Ethnic minority	20	8	17	8	30	8
Not currently married	171	68	166	73	258	68
Unemployed	108	44	105	46	137	37
Long-term sick	47	19	46	20	67	18
Living alone	84	34	88	39	165	44
Homeless	14	6	13	6	8	2
Method						
Hanging/strangulation	188	75	63	28	126	33
Self-poisoning	17	7	13	6	51	13
Carbon monoxide poisoning	0		5	2	9	2
Jumping/multiple injuries	5	2	97	43	113	30
Other	41	16	49	22	79	21

(continued overleaf)

Table 10: In-patient suicides: comparison of characteristics between absconders, in-patients who die on the ward and all other in-patients (continued)

	On ward Number (251)	%	Off ward without permission Number (227)	%	Off ward with permission (including leave) Number (378)	%
Behavioural features						
History of self-harm	197	80	165	74	276	75
History of violence	78	32	69	31	70	19
History of alcohol misuse	98	40	85	38	106	29
History of drug misuse	78	32	76	33	86	23
Priority Groups						
Under enhanced CPA	158	65	142	65	231	63
Non-compliance in last month	19	8	40	18	41	11
Clinical features						
Primary diagnosis:						
Schizophrenia and other delusional disorders	72	29	89	40	99	26
Affective disorder (bipolar disorder and depression)	122	49	103	46	225	60
Alcohol dependence	3	1	5	2	6	2
Drug dependence	2	1	1	0.4	1	0.3
Personality disorder	41	16	14	6	21	6
Any secondary diagnosis	124	49	112	50	173	46

(continued overleaf)

Table 10: In-patient suicides: comparison of characteristics between absconders, in-patients who die on the ward and all other in-patients (continued)

	On ward		Off ward without permission		Off ward with permission (including leave)	
	Number (251)	%	Number (227)	%	Number (378)	%
Risk						
Symptoms at last contact	183	75	145	65	186	52
Estimate of immediate risk: low or none	166	69	178	81	323	88
Estimate of long-term risk: low or none	106	44	103	48	193	54
Suicide thought to be preventable	81	34	67	32	75	21
Contact with services						
Duration of history (under 12 months)	54	22	48	21	80	21
Over 5 previous admissions	62	25	62	27	114	30
Observation level: high or medium	117	48	53	28	15	13
Suicide during period of planning discharge	35	14	58	26	199	54
Died within first week of admission	50	22	38	18	29	9
Died within local in-patient unit	185	82	134	70	191	65
Detained under MHA	85	34	56	25	65	17
Observation problems with ward design	51	21	39	19	33	10
Observation problems with other patients	28	11	13	6	9	3

Trends over time

Numbers of in-patient suicides are presented in Table 11. In this report we have presented numbers rather than rates, though rates follow the same patterns.[3]

From 1997 – 2004 the number of in-patient suicides fell. In 2004 there were 67 fewer in-patient suicides than in 1997, a fall of 30%. As a proportion of all patient suicides, in-patient suicides fell from 17% in 1997 to 11% in 2004.

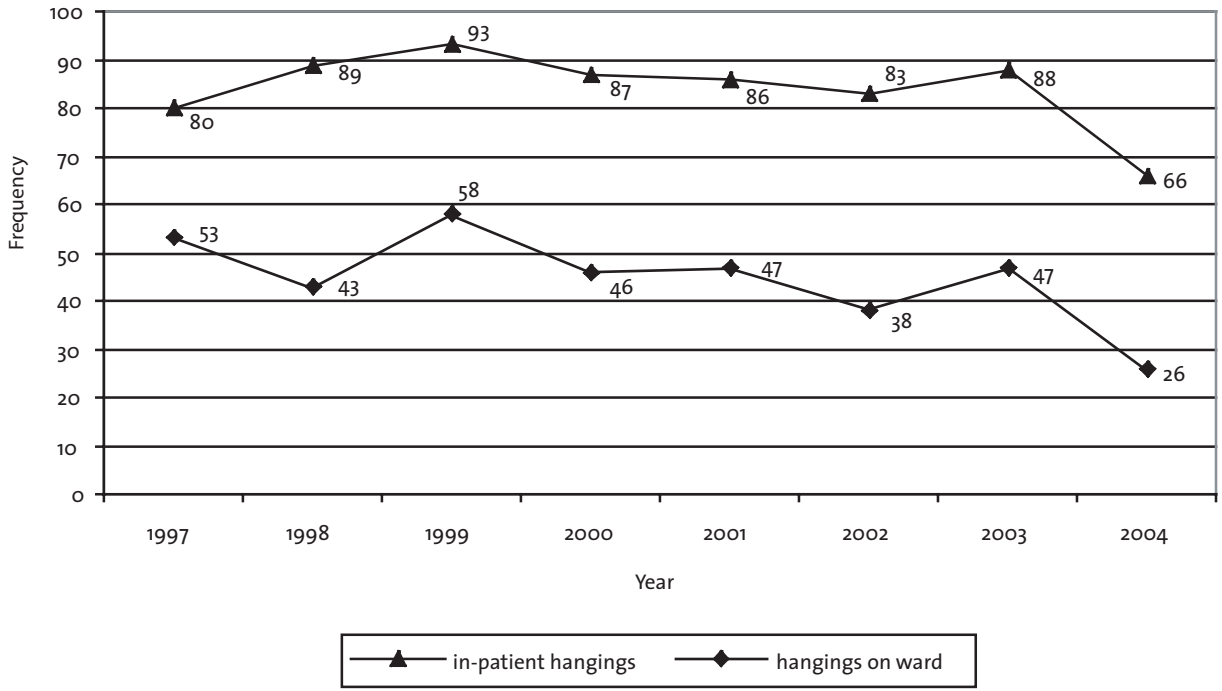
[3] Further discussion on this issue can be found in: Kapur N, Hunt I.M, Webb R, Bickley H, Windfuhr K, Shaw J, Appleby L (2006). Suicide in psychiatric in-patients in England, 1997 to 2006. Psychological Medicine, 36, 1485-1492.

Table 11: Inquiry in-patient suicide cases: trends over time 1997-2004

Year	Total number of patient suicides	In-patients Number (%)
1997	1,295	222 (17)
1998	1,354	200 (15)
1999	1,361	204 (15)
2000	1,352	212 (16)
2001	1,368	200 (15)
2002	1,329	175 (13)
2003	1,348	193 (14)
2004	1,396	155 (11)
Total	**10,803**	**1,561 (14)**

Suicides by all methods have fallen. Hanging/strangulation has become less frequent since a peak in 1999 (Figure 14). Deaths by hanging/strangulation on the ward itself have fallen from 53 in 1997 (and 58 in 1999) to 26 in 2004, a fall of 51%.

Figure 14: Inquiry in-patient hangings including strangulation 1997-2004



3.4. How safe are patients when discharged into the community?

There were 1,271 suicides within three months of discharge from in-patient care, representing 20% of the Inquiry sample and 24% of suicides by community patients.

Clinical and demographic characteristics

The key characteristics for this group are given in Table 12. Compared to the Inquiry sample as a whole, they were more likely to be female, unmarried, homeless and to have a history of self-harm and previous violence. They were less likely to die by self-poisoning and more likely to die by jumping/multiple injuries.

Patients who initiated their own discharge (either by self-discharge, request for discharge or discharge for breach of ward rules) constituted nearly one third (358 cases, 29%) of the post-discharge suicide group. Compared to those who died by suicide in the three months after planned discharge, they had higher rates of personality disorder, alcohol and drug dependence, alcohol misuse and drug misuse. When these patients were omitted from the sample, the pattern of timing of suicides following discharge was essentially the same as all post-discharge patients.

Final admissions

In 1,065 (84%) cases the final admission had been voluntary. In 27% the final admission lasted less than seven days. Two hundred and ninety-one cases (23%) of final admissions were re-admissions within three months of a previous discharge. Re-admissions, short final admissions and self-discharge were more common in post-discharge suicides than in community suicide cases overall.

Discharge from final admission was planned in 870 (70%) and patient-initiated in 358 (29%). Most (92%) had a follow-up appointment arranged on discharge but in 255 cases (22%) the suicide took place before first follow-up, fewer than the 40% who died before the first follow-up in the previous Inquiry report. Non-compliance with drug treatment was less common (16%) than in the previous Inquiry report (22%).

The post-discharge suicide cases were more likely than other community suicides to have been in contact with services in the week before death (730 cases, 58% v. 1,391 cases, 35%) and more likely to be under the higher levels of enhanced CPA (572 cases, 46% v. 1,014 cases, 25%). Estimates of risk at final contact were more likely to be viewed as moderate or high. A similar proportion to the rest of the sample as a whole were seen as preventable.

Table 12: Social and clinical characteristics of Inquiry suicide cases within three months of in-patient discharge

	Number (1,271)	%	(95% CI)
Demographic features			
Age: median (range)	43 (16-88)	-	-
Male	790	62	(59-65)
Ethnic minority	70	6	(4-7)
Not currently married	905	72	(69-74)
Unemployed	521	42	(39-44)
Long-term sick	211	17	(15-19)
Living alone	570	46	(43-48)
Homeless	39	3	(2-4)
Priority groups			
Under enhanced CPA	572	46	(43-48)
Missed last contact	316	25	(23-28)
Non-compliance in the last month	191	16	(14-18)

(continued overleaf)

Table 12: Social and clinical characteristics of Inquiry suicide cases within three months of in-patient discharge (continued)

	Number (1,271)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	203	16	(14-18)
Affective disorder (bipolar disorder and depression)	552	44	(41-46)
Alcohol dependence	114	9	(7-11)
Drug dependence	38	3	(2-4)
Personality disorder	136	11	(9-13)
Any secondary diagnosis	741	59	(56-61)
Duration of history (under 12 months)	295	24	(21-26)
Over 5 previous admissions	284	22	(20-25)
Last admission was a re-admission	291	23	(21-26)

(continued overleaf)

Table 12: Social and clinical characteristics of Inquiry suicide cases within three months of in-patient discharge (continued)

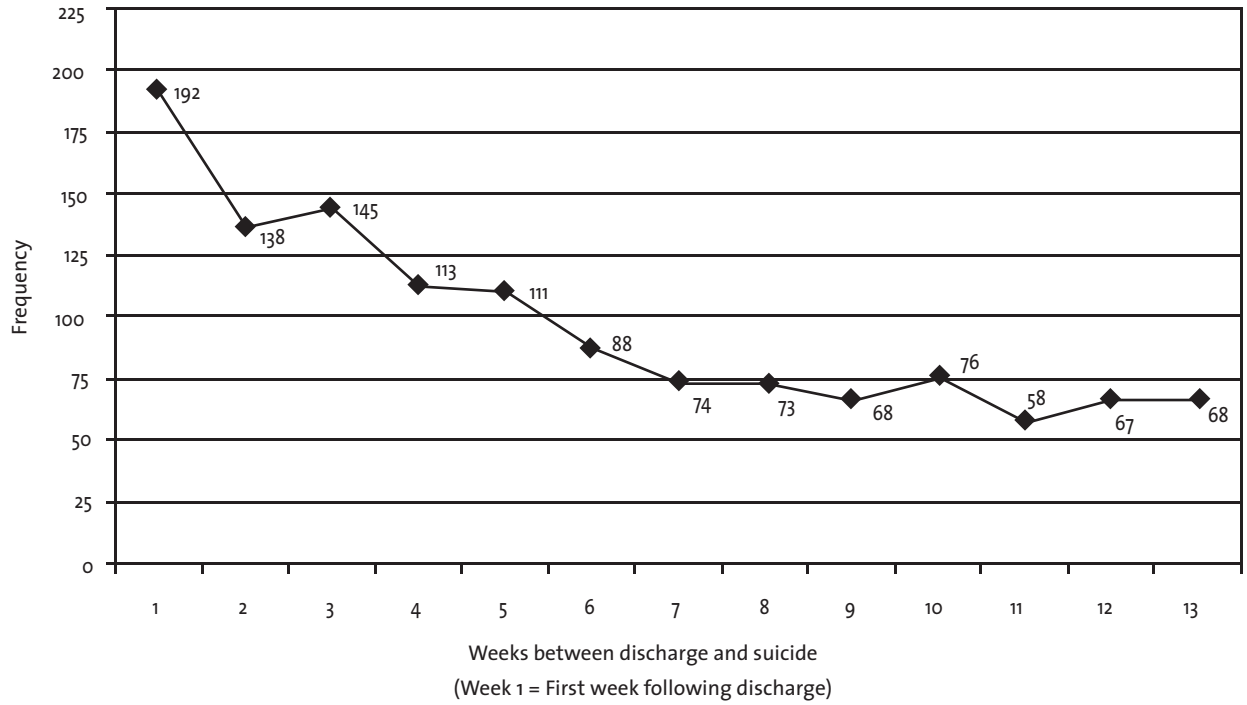
	Number (1,271)	%	(95% CI)
Behavioural features			
History of self-harm	950	76	(74-79)
History of violence	286	23	(21-26)
History of alcohol misuse	586	47	(44-50)
History of drug misuse	389	31	(29-34)
Contact with services			
Last contact within 7 days of death	730	58	(55-61)
Symptoms at last contact	731	60	(57-63)
Estimate of immediate risk: low or none	998	84	(82-86)
Estimate of long-term risk: low or none	577	49	(47-52)
Suicide thought to be preventable	206	18	(16-20)

Timing

Post-discharge suicide cases were most frequent in the first three weeks after leaving hospital when 475 deaths occurred (Figure 15), 14% of all suicides by community patients (compared to 15% in the previous Inquiry report) and 37% of the total post-discharge sample (compared to 40% in the previous Inquiry report). They were similar demographically and clinically to the post-discharge sample as a whole, but they were more likely to have discharged themselves. Forty-six percent of this group died before follow-up, substantially fewer than the 68% in the previous Inquiry report.

Of the 475 suicide cases within the first three weeks of discharge, 191 (41%) were under enhanced CPA. After the first three weeks the weekly number declined steadily. There were 192 suicide cases within the first week after discharge, the highest figures occurring on days 1-4 (Figure 16).

Figure 15: Number of Inquiry suicide cases per week following discharge

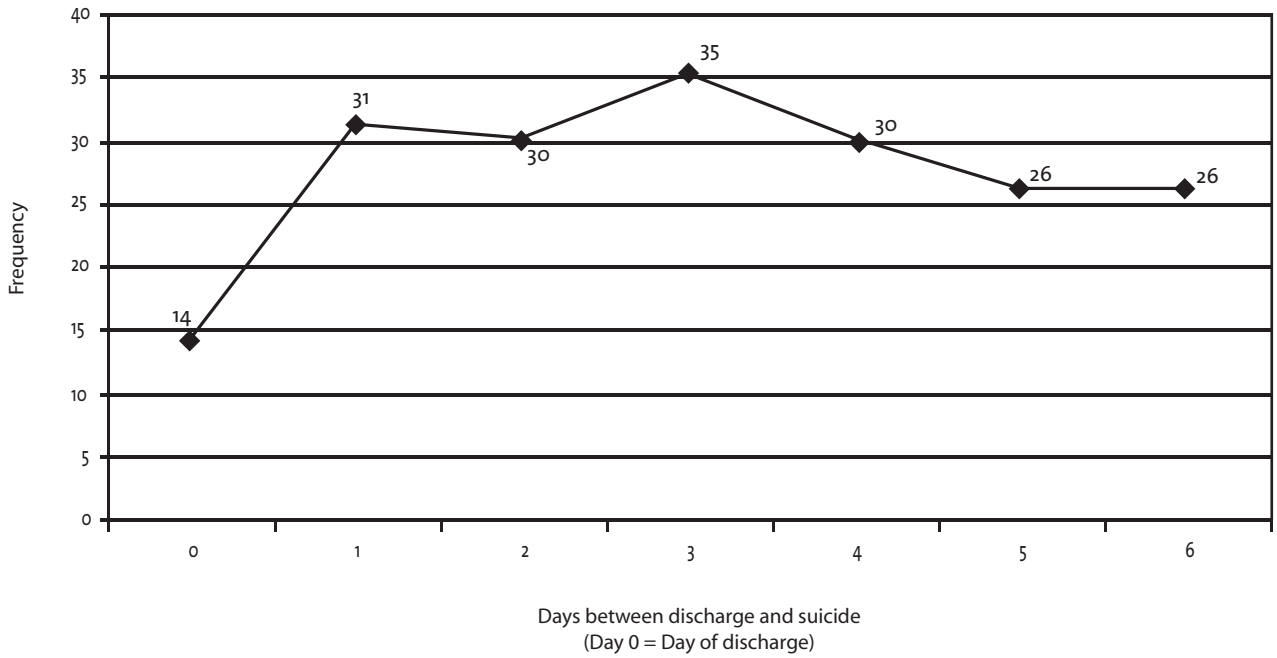


Trends

There are no clear trends in the numbers of post-discharge suicide cases. The number of cases remain the same, as do the proportion of community suicides. Clustering in the immediate post-discharge period appeared to have reduced as did the number of deaths that occurred before follow-up. However, we also have evidence that the rate of post-discharge suicide may have increased slightly. [4]

[4]Although the numbers appear to be decreasing there is a non-significant increase in the rate of suicide among these individuals. Further discussion on this issue can be found in: Kapur N, Hunt I.M, Webb R, Bickley H, Windfuhr K, Shaw J, Appleby L (2006). Suicide in psychiatric in-patients in England, 1997 to 2006. Psychological Medicine, 36: 1485-1492.

Figure 16: Number of Inquiry suicide cases per day following discharge



3.5. Is suicide risk recognised?

Risk

At final service contact, high immediate risk was identified in 2% (106 cases) while high long-term risk was identified in 9% (520 cases) of patients. Immediate risk of suicide was estimated to be low or absent in 86% of cases while long-term risk was thought to be low or absent in 59% of cases (Figure 17).

Of patients seen by services in the week prior to death (2,955 cases), immediate risk was viewed as high in eighty-three (3%) cases and long-term risk was viewed as high in three hundred and fourteen (11%) cases.

Figure 17: Mental health teams' estimation of suicide risk at last contact: Inquiry suicide cases

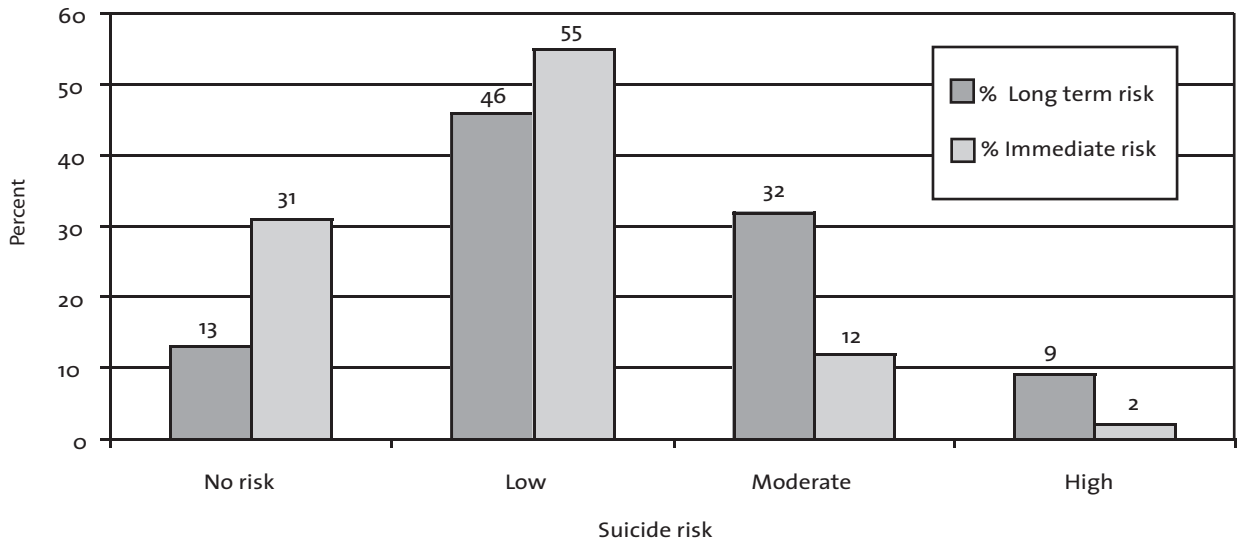


Table 13 lists the factors associated with staff judgements that risk was high or moderate (compared to low or no risk). The table presents associations for immediate and long-term risk separately. In determining high or moderate immediate risk, staff appeared to be less influenced by social factors (marital state, living alone) or behavioural history (violence, substance misuse).

Table 13: Factors associated with estimation of risk as high or moderate: Inquiry suicide cases

Immediate risk only
Duration of history (under 12 months)
Affective disorder
Long-term risk only
Unmarried
Living alone
History of violence
History of alcohol/drug misuse
Co-morbidity
Duration of history (over 5 years)
Both immediate and long-term risk
Female
Homeless
Younger
In-patients
Post-discharge patients
Under enhanced CPA
Non-compliance in last month
Over 5 previous admissions
Personality disorder
Last admission was a re-admission
Last contact within 7 days of death
Symptoms at last contact

3.6. Is CPA used to manage suicide risk?

There were 2,118 suicide cases under enhanced CPA at a level requiring multidisciplinary review (35% of the Inquiry sample, a decrease from the 47% in the previous Inquiry report) – corresponding to "enhanced CPA."

Care arrangements

Five hundred and thirty-one cases (25%) of suicide under enhanced CPA were in-patients at the time of suicide. Five hundred and seventy-two (36%) had been discharged from in-patient care in the previous three months. Of the 1,587 suicide cases under enhanced CPA who died in the community, 91% had been admitted at some time prior to their suicide. Twenty-five percent had last been admitted under the Mental Health Act. At the time of discharge 98% had been allocated a key worker and in 81% a date had been set for the next review. A follow-up appointment had been arranged in 99%. Despite being under enhanced CPA, 20% were non-compliant with drug treatment in the month before death, and just over a quarter (425 cases, 27%) had missed their last service contact. The main reason for non-compliance was thought to be lack of insight into illness. Ten percent complained of distressing side-effects.

Final contact

Six hundred and sixty-seven (32%) suicides were seen within 24 hours of death. The key worker was present at final contact in 58% (1,126 cases). Estimates of risk at final contact were more often viewed as moderate or high in those under enhanced CPA. Suicide cases under enhanced CPA were not seen as more or less preventable than the sample as a whole.

Absence of enhanced CPA in high risk patients

Three hundred and ninety-four suicides with schizophrenia (35% of suicides with this diagnosis) and 1,818 suicides with affective disorders (66% of those with this diagnosis) were not under enhanced CPA. Among those in this group who had a primary diagnosis of schizophrenia, 41% lived alone, 59% had been ill for more than five years, 82% had had at least one admission to hospital, 51% had a history of self-harm and 23% were non-compliant with treatment in the month prior to death. Among the group with affective disorder not under enhanced CPA, 37% lived alone, 41% had been ill for more than five years and 62% had a lifetime history of self-harm.

3.7. Do patient suicides follow loss of treatment?

Non-compliance

There were 813 cases in which the patient was known to be non-compliant with drug treatment in the month before suicide, 14% of the total sample (Table 14). This contrasts with 929 cases (22%) in the previous Inquiry report. Two hundred and seventy-six (39%) of the non-compliant cases had also missed their final appointment with services.

Compared to the rest of the sample, the non-compliant cases were more likely to be male (70% v. 65%), single (76% v. 68%), unemployed (45% v. 38%) and living alone (51% v. 42%). They were similar on many clinical variables, though they had a higher rate of schizophrenia (30% v. 18%), longer illness duration (83% had been ill for longer than a year v. 79%) and higher rates of violence (25% v. 20%), alcohol (49% v. 41%) and drug misuse (42% v. 27%). Non-compliant cases were more likely to display co-morbidity, i.e. to have at least one secondary diagnosis (61% v. 52%).

One hundred and sixty-nine (21%) of the non-compliant group were people with schizophrenia who were also misusing alcohol or drugs.

Non-compliant suicides had higher rates (17%) of distressing side-effects of medication, although the most common reason for non-compliance was thought by staff to be lack of insight (48%). In patients whose non-compliance was attributed to side-effects of medication (106 cases, 15%), the most common type of medication implicated was antipsychotic treatment, either orally or by injection. Seventy-four percent (303 cases) of those who were taking oral antipsychotic drugs were taking "atypical" drugs.

Service response to non-compliance

Non-compliant cases were more likely to be subject to the higher levels of the CPA (46%). Previous detention under the Mental Health Act was more common. A face-to-face attempt to encourage compliance with medication in the month before death took place in 73%, an increase from the previous Inquiry report (62%).

In 83% (165 cases) of non-compliant patients with schizophrenia, a face-to-face attempt was made to encourage compliance with treatment in the month before death and in 63% there was contact with the patients family.

Preventability

Non-compliant suicides were more often seen as preventable (24%). Better compliance and closer supervision were thought to be the main ways in which suicide risk could have been reduced. In 34 cases (4%), respondents thought that new legal powers would have made suicide less likely. Better liaison between different services was specified in 15% of non-compliant patients.

Table 14: Social and clinical characteristics of Inquiry suicide cases who were non-compliant with medication

	Number (813)	%	(95% CI)
Demographic features			
Age: median (range)	39 (16-87)	-	-
Male	569	70	(67-73)
Ethnic minority	64	8	(6-10)
Not currently married	612	76	(73-79)
Unemployed	358	45	(41-48)
Long-term sick	162	20	(17-23)
Living alone	405	51	(47-54)
Homeless	18	2	(1-4)
Priority groups			
In-patients	100	12	(10-15)
Post-discharge patients	191	27	(24-30)
Under enhanced CPA	372	46	(43-50)
Missed last contact	276	39	(36-43)

(continued overleaf)

Table 14: Social and clinical characteristics of Inquiry suicide cases who were non-compliant with medication (continued)

	Number (813)	%	(95% CI)
Clinical features			
Primary diagnosis:			
Schizophrenia & other delusional disorders	245	30%	(27-33)
Affective disorder (bipolar disorder and depression)	344	42%	(39-46)
Alcohol dependence	50	6%	(5-8)
Drug dependence	28	3%	(2-5)
Personality disorder	67	8%	(6-10)
Any secondary diagnosis	495	61%	(58-64)
Duration of history (under 12 months)	133	17%	(14-19)
Over 5 previous admissions	140	17%	(15-20)
Last admission was a re-admission	105	20%	(17-24)

(continued overleaf)

Table 14: Social and clinical characteristics of Inquiry suicide cases who were non-compliant with medication (continued)

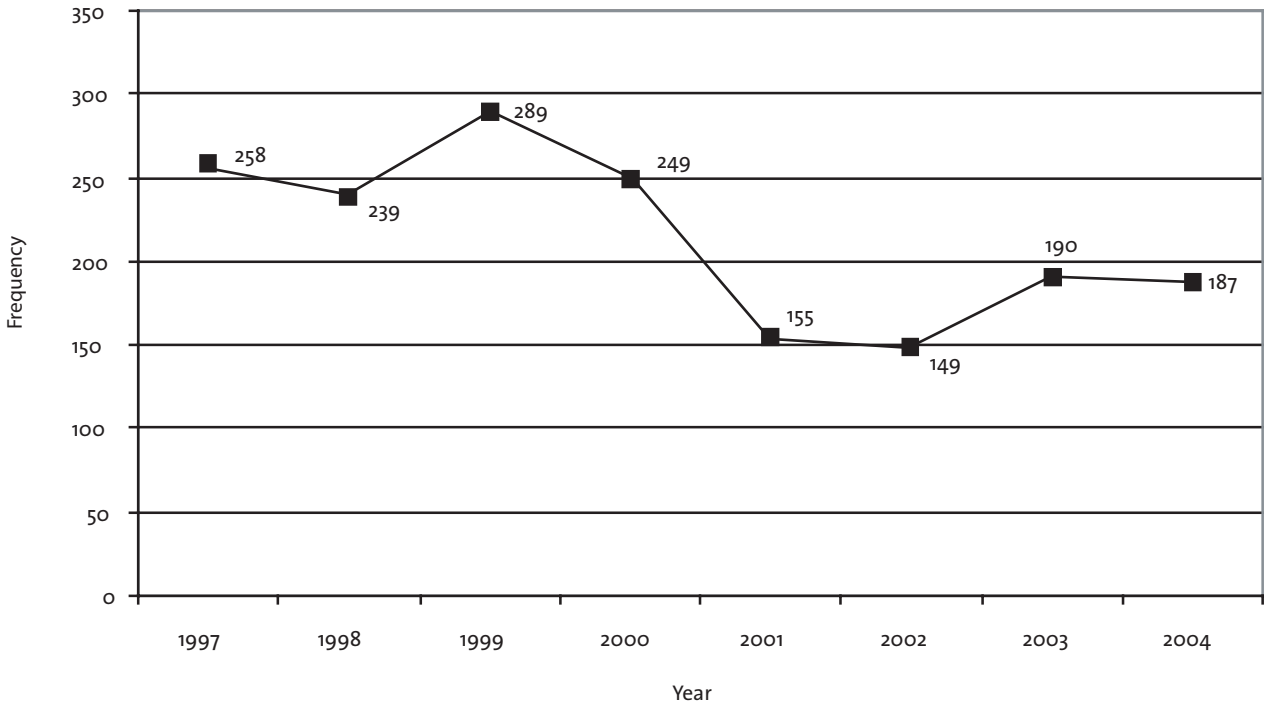
	Number (813)	%	(95% CI)
Behavioural features			
History of self-harm	560	70%	(67-73)
History of violence	200	25%	(22-28)
History of alcohol misuse	391	49%	(45-53)
History of drug misuse	336	42%	(39-46)
Contact with services			
Last contact within 7 days of death	437	54%	(51-58)
Symptoms at last contact	552	70%	(67-73)
Estimate of immediate risk: low or none	640	82%	(79-84)
Estimate of long-term risk: low or none	409	53%	(50-57)
Suicide thought to be preventable	178	24%	(21-27)

Trends in suicides among non-compliant patients

Overall, the number of suicides who were non-compliant with their medication has declined (Figure 18). In 2004, 71 fewer cases occurred than in 1997. The number of suicides with a primary diagnosis of schizophrenia who were non-compliant with medication has also fallen since 1997 (77 cases to 52 cases in 2004).

The number of suicides who were non-compliant while prescribed tricyclics dropped from the 49 reported in 1999 to 19 in 2001, and has remained at approximately this level since. Similarly, there has been a steady decline in the number of suicides who were non-compliant while prescribed conventional antipsychotics (from 289 in 1999 to 118 in 2004, a drop of 59%).

Figure 18: Number of Inquiry suicide cases non-compliant with medication 1997-2004



Missed last appointment with services

There were 1,523 suicides by people who missed their final service contact, 29% of the community sample. There were small but significant differences from the rest of the sample. They had high rates of being unmarried (76%), unemployed (48%) and living alone (49%). Their clinical histories were similar but they were more likely to have a primary diagnosis of alcohol dependence (14%), personality disorder (10%) and drug dependence (6%) and less likely to have affective disorder (38%). Schizophrenia (17%) and affective disorder were the most common diagnoses. They had higher rates of both alcohol and drug misuse (56% and 39% respectively) and a higher rate of violence (25%) and previous self-harm (69%).

Overall, services had made a recent assertive attempt to re-engage the patient in 89% of cases. Twenty 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 patient compliance (574 cases, 41%) and closer supervision (432 cases, 31%).

Trends in patients who missed their last appointment

Since 1997 a total of 2,630 suicides missed their last appointment. There was no clear trend during the period of data collection, though the highest figures were in 2003 (342 cases) and 2004 (352 cases).

3.8. Is the changing use of antidepressants affecting suicide figures?

Prescribing

Prescribing patterns have changed during the period of Inquiry data collection. Tricyclic antidepressants are now used less frequently and SSRI/SNRI drugs are used more often. We have collected data on drug prescribing prior to suicide since 1999 (tricyclics) and 2000 (SSRI/SNRI).

Overdoses

Figure 19 shows the number of fatal antidepressant overdoses by mental health patients since 1999/2000. Overall, tricyclic overdose deaths have fallen while SSRI/SNRI overdose deaths have not changed. This could reflect changes in prescribing patterns among mental health patients.

Figure 19: Changes over time in the use of tricyclics and SSRI/SNRI self-poisoning by Inquiry suicide cases (1999-2004)

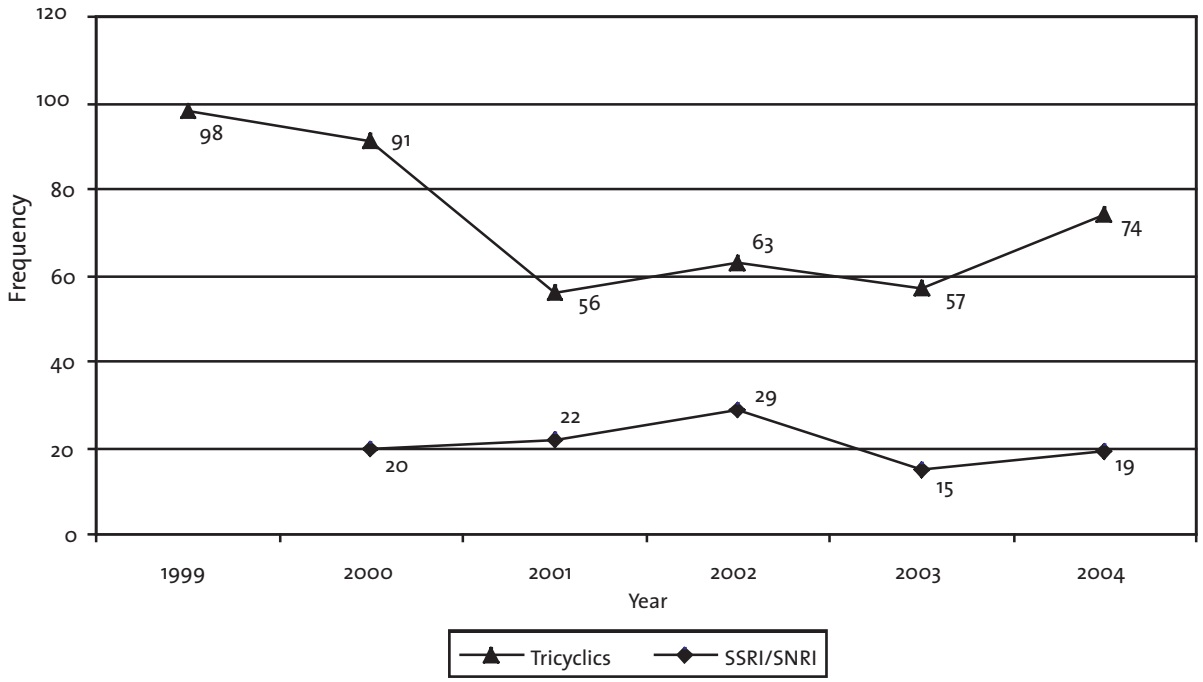
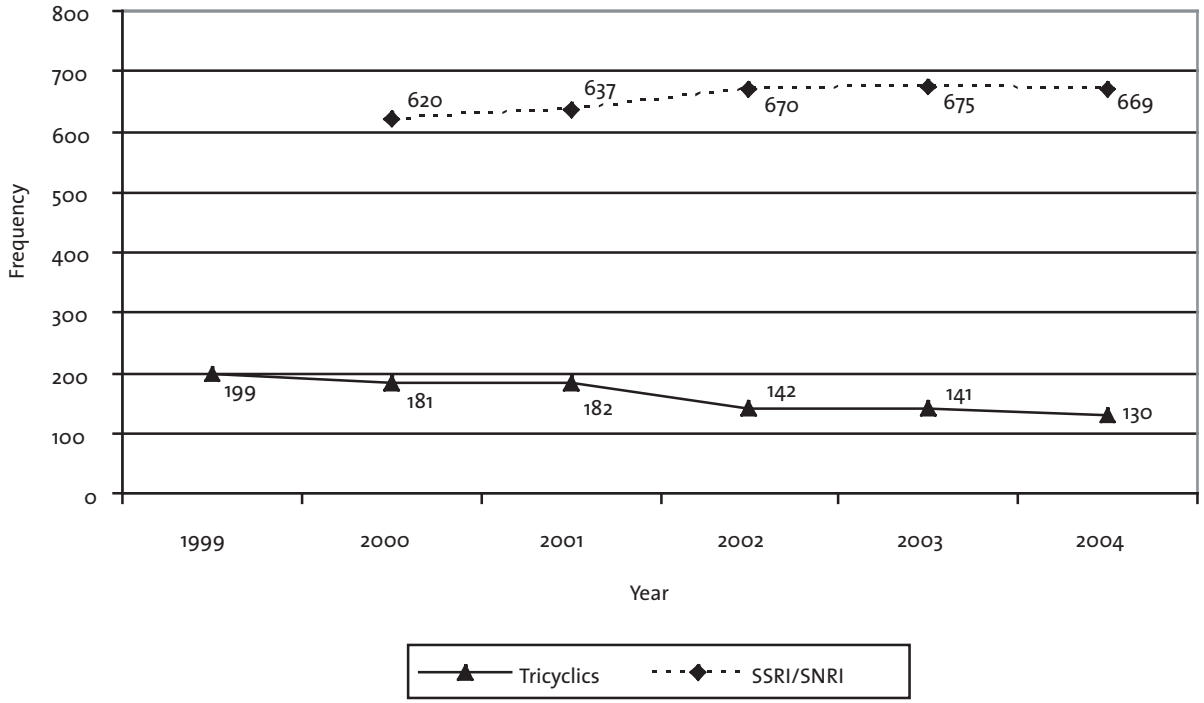


Figure 20 shows the number of suicides by patients receiving antidepressants regardless of suicide method. The figures reflect prescribing patterns with a decrease in those taking tricyclics and an increase in those taking SSRI/SNRIs. There appears to have been no overall fall in suicides by patients taking antidepressants. This is mirrored in the number of suicide deaths in those with a primary diagnosis of depression in our sample, which has remained fairly constant (varying from 475 deaths in 1999 to 493 deaths in 2004).

Figure 20: Changes over time in the prescription of antidepressant drugs to Inquiry suicide cases (1999-2004)

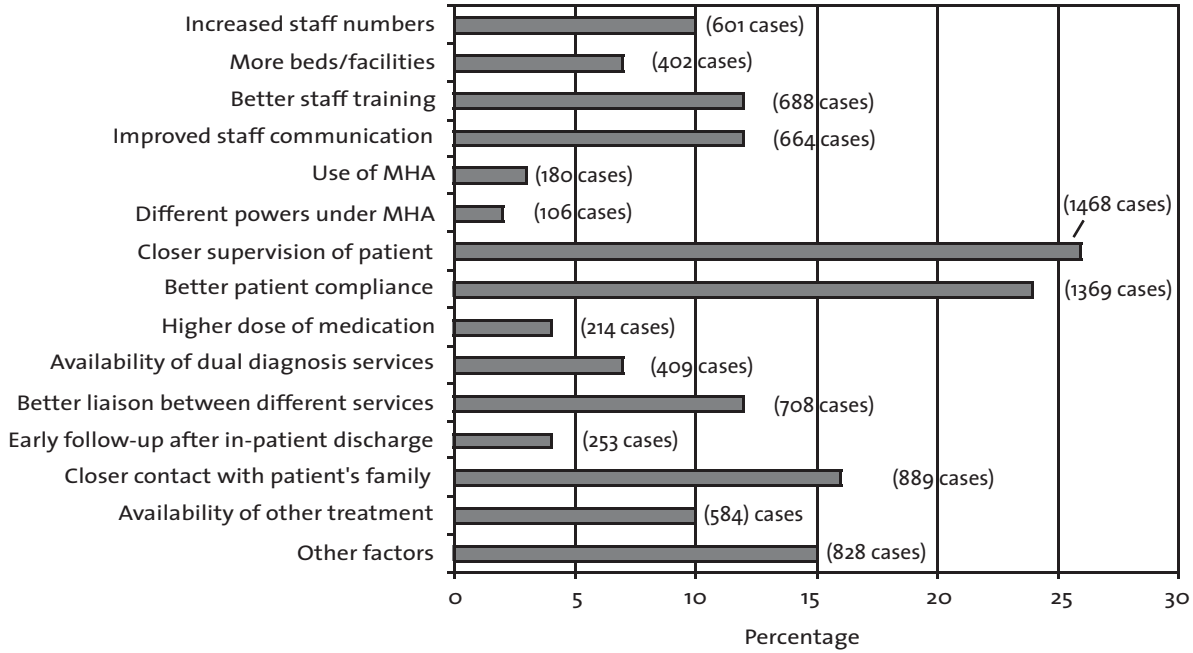


3.9. How many suicides could be prevented?

Clinicians' views

In 1,017 cases (19%), the respondent believed that the suicide could have been prevented, a decrease from 21% of cases believed to be preventable in the previous Inquiry report. Suicides perceived as preventable were more likely to be suffering from affective disorder (520 cases, 52% v. 2,026 cases, 46% of those not viewed as preventable). They were more likely to have been in-patients at the time of death (223 cases, 22% v. 583 cases, 13%). Irrespective of whether they were in hospital or in the community, they were more likely to have detectable symptoms at final contact (763 cases, 77% v. 2,606 cases, 60%) and more often thought to be at moderate or high risk at final contact (218 cases, 23% v. 509 cases, 12%). Cases of suicide in those aged under 25 (467 cases) were seen as more preventable (95 cases, 23% v. 922 cases, 18%). Cases of suicide by patients with severe mental illness (3,966) were seen as more preventable (727 cases, 20%); suicides by people with drug dependence (206 cases) were seen as the least preventable (22 cases, 14%).

Figure 21: Mental Health teams' views on preventability: Inquiry suicide cases



In 61% of cases (3,638 cases) respondents suggested factors that could have made the suicide less likely (Figure 21). The most frequent suggestions were closer patient supervision (26%), better patient compliance with treatment (24%), closer contact with the patient's family (16%), improved liaison between services (12%) and better staff training (12%). Better compliance was more often mentioned in relation to younger patients.

Figures for preventable suicide cases were projected for the time period 1997 to 2004. The number ranged from 184 to 246 preventable suicides per year, with no discernible trend.

Preventable suicides

The most preventable deaths among the Inquiry sample might be those who died in close proximity to services, especially those whose risk was evident but who did not receive care that was commensurate with their risk. We can therefore calculate the size of a group in whom suicides might have been most preventable:

(1) Among in-patients:

- Patients who committed suicide while under close observation (185 cases)
- Patients detained under the Mental Health Act who committed suicide within 7 days of admission (19 cases)
- High risk informal patients who committed suicide within 7 days of admission – high risk here means severe mental illness or recent (within 3 months) self-harm (86 cases)
- High risk patients who were living alone and committed suicide later in their admission after being given home leave (99 cases)
- Patients who committed suicide within 7 days of admission who had absconded from the ward (38 cases)

In total, because these groups overlap, we estimate that 349 cases, or 41% of in-patient suicides may have been preventable.

(2) Among the post-discharge patients:

- Patients who died by suicide before their first follow-up (255 cases, 22% of post-discharge suicides).

(3) Among community patients (excluding the post-discharge cases):

- Patients who were detained under the Mental Health Act in their last admission, who were not subject to enhanced CPA (211 cases)

- Patients with both severe mental illness and recent self-harm who were not subject to enhanced CPA (239 cases)

  In total, allowing for overlap, 436 cases.

- CPA patients- (i.e. subject to multidisciplinary review) who were non-compliant in the month before suicide, with no direct attempt to encourage compliance (22 cases)

- CPA patients who missed an appointment, with no assertive response by services (51 cases)

  In total, allowing for overlap, 68 cases.

In total, allowing for overlap, we estimate that 504 cases, 12% of community suicides may have been preventable.

Putting all three groups together (in-patients, post-discharge patients and community patients) gives 1,108 cases, 233 per year, 18% of all patient suicides that were in the "most preventable" group. The calculation of preventable deaths is necessarily crude. However, these are the most obviously preventable patient suicides and can be seen as a prevention priority.

Community treatment orders

We have no reliable way of calculating how many suicides would be prevented by a community treatment order. Our figures do, however, indicate the potential for prevention. Our sample contains 264 patients who had been detained in their final admission and who died following non-compliance with medication or loss of contact with services, 4% of cases or 56 per year.[†] Overall, 14% of patient suicides were preceded by non-compliance.

[†]This figure is not comparable with the figure given for homicide on page 139. The suicide figure is based on a more restrictive definition, i.e. legal status in last admission.

3.10. How have numbers of suicides in Inquiry priority groups changed?

The Inquiry specifies five "priority groups" for data collection and suicide prevention (Table 15). The number of deaths in four of these has fallen since 1997, the exception being those who missed their last appointment (see also page 79 for comments on trends in post-discharge deaths).

Suicides by people in more than one priority group

The number of suicide deaths fell in people in more than one priority group, (assumed to be those at greatest risk), but rose in people in one priority group or none (Table 16). It may be that the number of patients in each group has fallen with the effect that the number of suicides has also fallen or that services are now providing better protection to those at greatest risk.

Table 15: Number of Inquiry suicide cases by priority group (1997-2004)

Year	In-patient	Post-discharge	Under enhanced CPA	Missed last contact	Non-compliance in last month
1997	222	281	639	309	258
1998	200	294	683	326	239
1999	204	289	655	325	289
2000	212	294	596	319	249
2001	200	294	431	339	155
2002	175	263	390	318	149
2003	193	279	464	342	190
2004	155	262	500	352	187
Total	**1,561**	**2,256**	**4,358**	**2,630**	**1,716**

Suicides by people who are not in any priority group

In previous sections we have discussed those patients in key demographic, clinical, and priority sub-groups. In this section we describe the characteristics of those patients who did not meet the criteria for inclusion in any of the priority groups.

In our sample there were 1,644 cases (27%) of suicide who were not under any of the five priority groups. These cases were more likely to be older and married compared to suicides who were in a priority group. Rates of previous violence, self-harm and alcohol or drug misuse were significantly lower. They were more likely to have a primary diagnosis of affective disorder and proportionally less had a co-morbid psychiatric condition. Illness onset was more often within a year of the suicide. Most of these characteristics are usually taken to indicate low risk, and care reflected this. Risk of suicide was more often viewed as low or absent and fewer received a follow-up appointment at last discharge or were allocated a care co-ordinator. Respondents were less likely to view non-priority group suicides as preventable.

Table 16: Number of Inquiry suicide cases according to number of priority groups (1997-2004)

Year	Number of priority groups					
	0	1	2	3	4	Total
1997	232 (9%)	443 (11%)	400 (14%)	134 (16%)	16 (17%)	1,296
1998	239 (9%)	457 (12%)	422 (15%)	128 (16%)	14 (15%)	1,353
1999	271 (11%)	456 (12%)	399 (14%)	151 (19%)	14 (15%)	1,362
2000	311 (12%)	468 (12%)	377 (13%)	126 (15%)	18 (20%)	1,352
2001	363 (14%)	542 (14%)	320 (11%)	62 (8%)	12 (13%)	1,367
2002	398 (16%)	508 (13%)	288 (10%)	64 (8%)	5 (5%)	1,329
2003	342 (14%)	502 (13%)	355 (12%)	77 (9%)	6 (7%)	1,347
2004	368 (15%)	558 (14%)	326 (11%)	73 (9%)	7 (8%)	1,396
Total	**2,524**	**3,934**	**2,887**	**815**	**92**	**10,802**

3.11. Are services adopting Inquiry recommendations?

Data were collected from mental health trusts (MHT) in England and Wales, covering the nine key service recommendations (KSR) listed in Table 17. The last census date was in 2006.

Overall, the number of key service recommendations implemented has increased since 1998. Table 17 describes implementation at the last key census date of 73 MHT in England.

Highest full compliance is for:

- Key service recommendation 2 with 71 mental health trusts reporting implementation
- Key service recommendations 4-69 mental health trusts
- Key service recommendations 1-69 mental health trusts

Lowest full compliance is for:

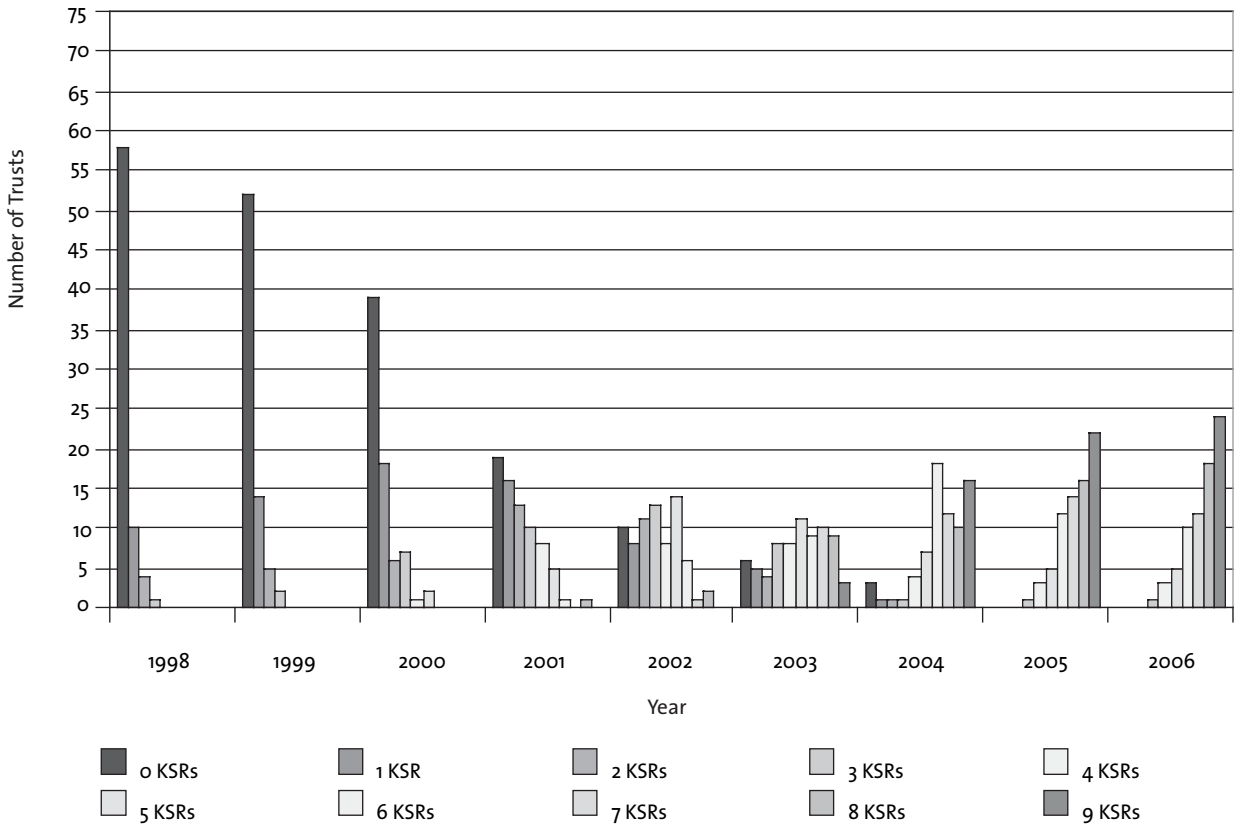
- Key service recommendations 6-40 mental health trusts
- Key service recommendations 3-51 mental health trusts

Table 17: Implementation of individual key service recommendations by trusts (as of 2006)

KSR	Description of Key Service Recommendation	Full	Partial
1	The removal of ligature points on in-patient wards including non-collapsible curtain rails	69 (95%)	70 (96%)
2	Community services include an assertive outreach team	71 (97%)	71 (97%)
3	Community services include a single point of access for people in crisis available 24 hours a day (as part of the mental health service)	51 (70%)	51 (70%)
4	There are written policies/strategies regarding follow up within 7 days of discharge from psychiatric in-patient care	69 (95%)	69 (95%)
5	There are written policies/strategies regarding response to patients who are non-compliant with treatment	53 (73%)	53 (73%)
6	There are written policies/strategies regarding the management of patients with dual diagnosis	40 (55%)	40 (55%)
7	There are written policies/strategies regarding information sharing with criminal justice agencies on risk	62 (85%)	63 (86%)
8	There are written policies/strategies regarding multi-disciplinary review and the sharing of information with families after suicide	63 (86%)	63 (86%)
9	Training and record-keeping: front-line clinical staff receive training in the management of suicide risk at least every three years	63 (86%)	64 (88%)

Figure 22 describes the annual total number of key service recommendations that were fully/partially implemented by each trust. The majority of trusts (58 trusts) had not implemented any key service recommendations in 1998 whilst one trust was implementing three. Over time the number of mental health trusts not implementing key service recommendations (either fully or partially) has fallen annually to 52, 39, 19, 10, 6, 3 in successive years and to zero in 2005. The first mental health trust to implement (either fully or partially) all nine key service recommendations did so in 2003. By 2006 there were 24 implementing (either fully or partially) all nine key service recommendations. The average number of key service recommendations that have been implemented (either full or partial) each year increased in successive years from less than one key service recommendation (0.3) in 1998 to 0.4, 0.9, 2.0, 3.2, 4.8, 6.5, 7.3 and 7.5 in 2006.

Figure 22: The distribution of the total number of key service recommendations fully or partially implemented by year†



† The height of each bar indicates the number of trusts implementing the indicated number of key service recommendations.

chapter four
HOMICIDE INQUIRY

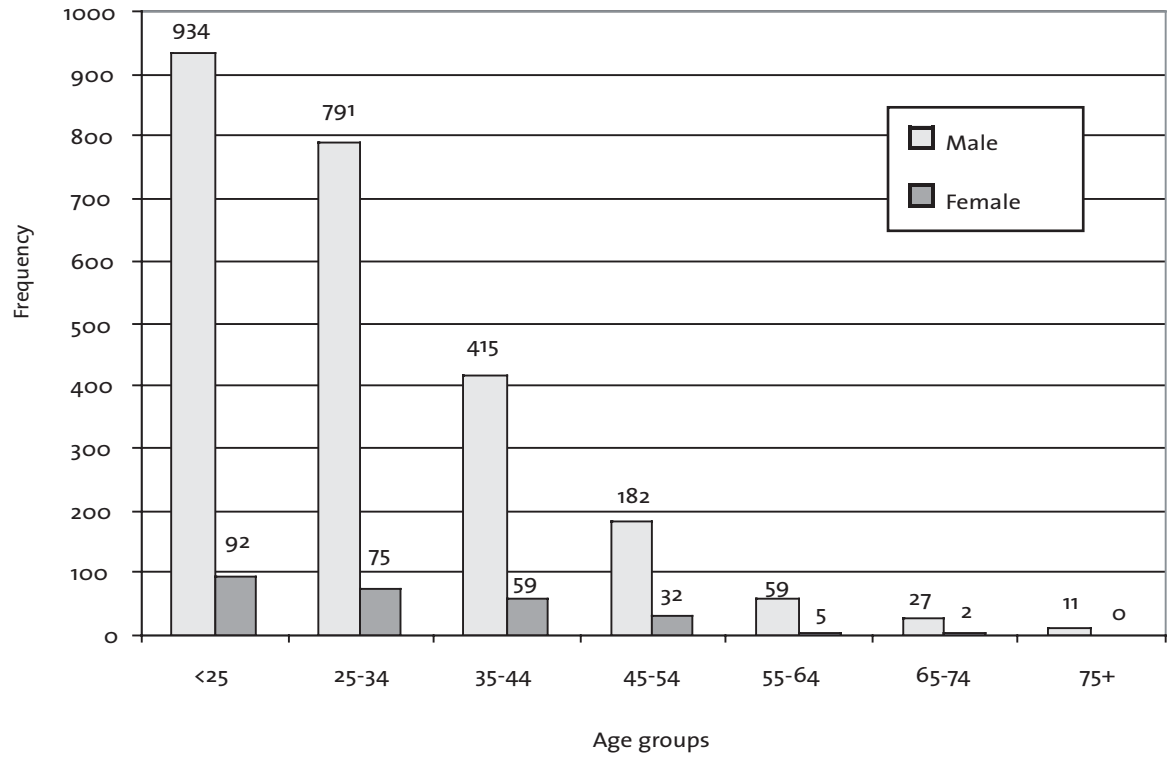
4.1. What is the pattern of homicide in England and Wales?

The Inquiry was notified of 2,670 homicide convictions in England and Wales during the time period April 1999 to December 2003. In an additional 14 cases, there was no conviction because the defendant was unfit to plead or not guilty by reason of insanity.

Perpetrators

Two thousand four hundred and nineteen (90%) perpetrators were male, giving a male to female ratio of 9:1; in the over 65s the male to female ratio was highest at 19:1 (Figure 23). Most perpetrators were young, with a median age of 28 years.

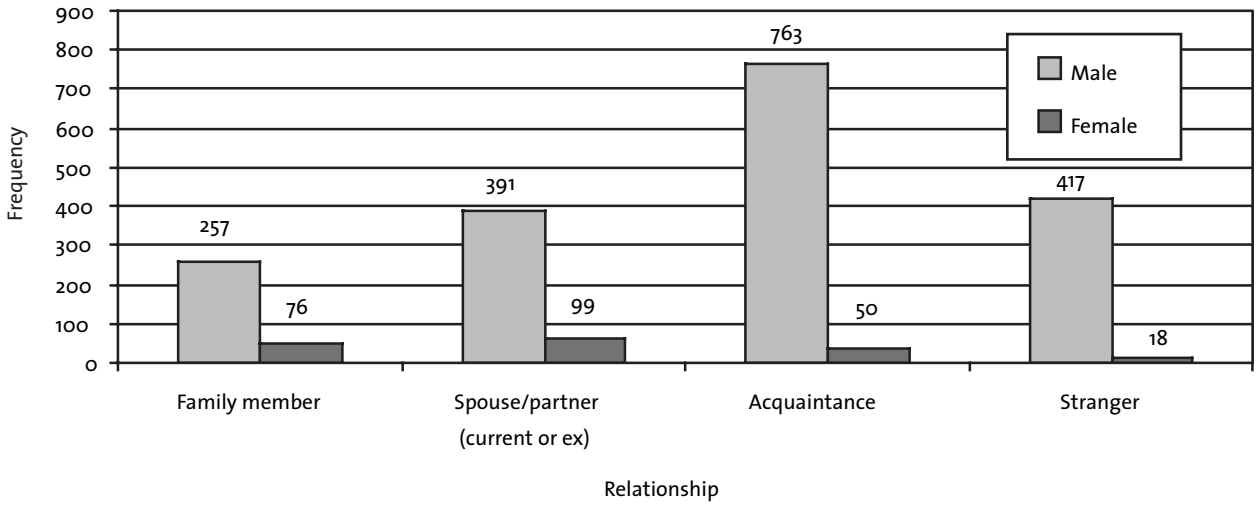
Figure 23: General population homicides: age and sex of perpetrators



Victims

Over half (1,051 cases, 55%) of the victims were young men aged under 35. One third (713 cases, 29%) of male perpetrators killed a female. In only 75 (3%) homicides both perpetrators and victims were female. Around a third (823 cases, 31%) of perpetrators killed a family member or a current or former spouse/partner, a third (813 cases, 30%) killed an acquaintance and one fifth (435 cases, 20%) killed a stranger (Figure 24). When women were the perpetrators, the victim was their own child in a quarter of cases (61 cases, 23%) and their current or former spouse/partner in over a third of cases (99 cases, 37%). When men were the perpetrators, the victim was a stranger in 417 (22%) cases. One hundred and ten victims (4%) were aged under one year, of whom 36 (33%) were killed by female perpetrators. The age groups of victims by sex of perpetrator is shown in Figure 25. There were 60 perpetrators over the age of sixty; two thirds (40 cases, 67%) of whom killed their spouse.

Figure 24: General population homicides: relationship to perpetrator by sex of perpetrator



Stranger homicides

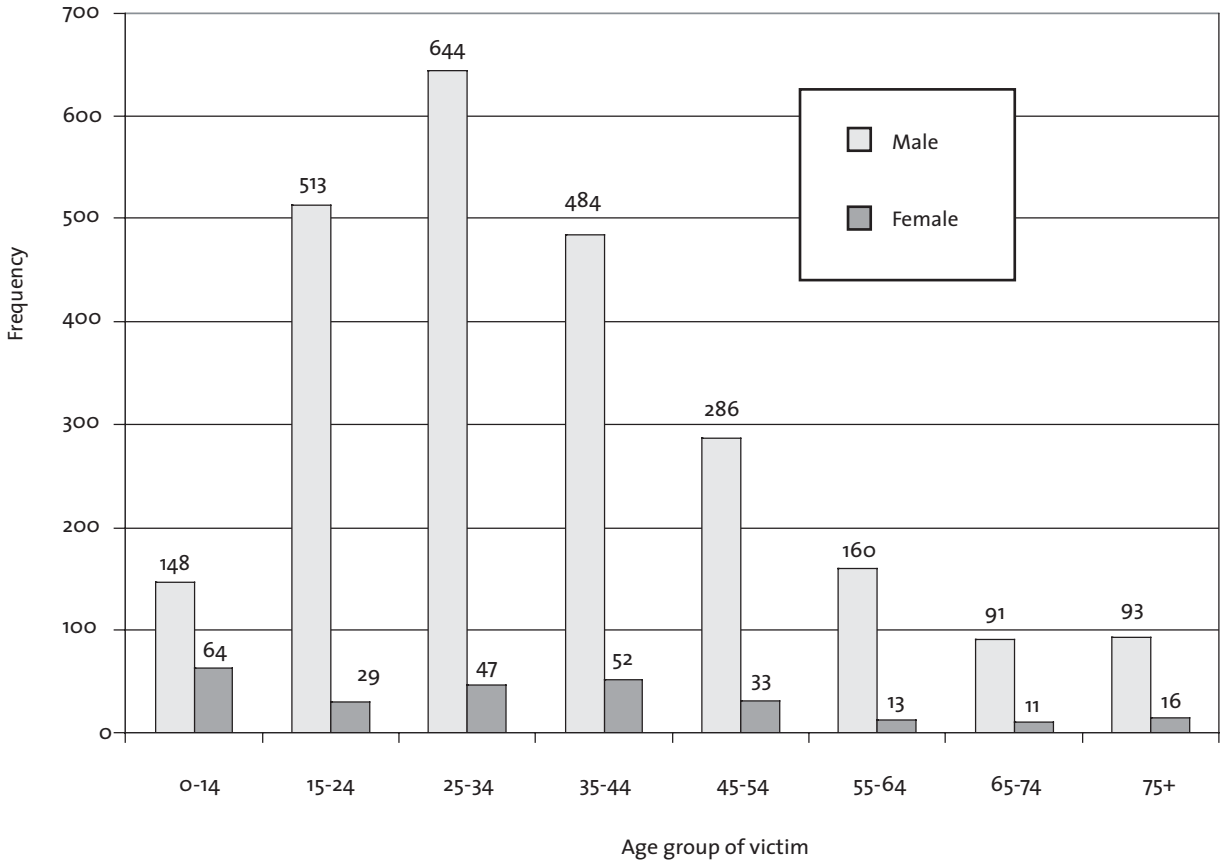
The victim was unknown to the perpetrator in 435 homicides (20% of the total sample). The perpetrators and victims of these killings were more likely to be young men below the age of 25 and the method of killing was less likely to be a sharp instrument (120 cases, 28% v. 679 cases, 40%) and more likely to be hitting and kicking (99 cases, 23% v. 206 cases, 12%). Perpetrators of stranger homicide were less likely to have a lifetime history of mental disorder (88 cases, 20% v. 627 cases, 37%), mental illness at the time of the offence (16 cases, 12% v. 228 cases, 26%) or contact with mental health services (54 cases, 12% v. 367 cases, 22%).

Stranger homicides by women were rare (18 cases, 7%). Only one of these women was mentally ill at the time of the offence, although over two-fifths (8 cases, 44%) had a lifetime history of mental disorder including 3 (17%) with drug dependence.

We have previously reported a large rise in stranger homicides but no rise in the number committed by people with mental illness.

We concluded that community care has not increased the risk to the general public.[5]

Figure 25: General population homicides: age of victims by sex of perpetrator



[5] Further discussion on this issue can be found in: Shaw J, Amos T, Hunt I.M, Flynn S, Turnbull P, Kapur N, Appleby L (2004). Mental illness in people who kill strangers. British Medical Journal, 328, 734-737.

Method

The commonest method of homicide (Figure 26) was by using a sharp instrument (971 cases, 36%); shooting was rare (176 cases, 7%). Males were more likely than females to use blunt instruments (258 cases, 11% v. 12 cases, 5%), hitting or kicking (389 cases, 16% v. 23 cases, 9%), strangulation (179 cases, 7% v. 10 cases, 4%) and shooting (169 cases, 7% v. 7 cases, 3%). The commonest method used by females was stabbing (sharp instrument) (117 cases, 44%), particularly if the victim was their current or former spouse/partner. There were some diagnostic differences in the method of homicide used; people with schizophrenia and those with alcohol dependence were more likely to use a sharp instrument (76 cases, 54% v. 64 cases, 48% respectively). Those with affective disorder (bipolar disorder and depression) used strangulation in 26 cases (18%) and those with drug dependence used poisoning in 10 cases (12%).

Outcome in court

Verdict

Of the 2,670 convictions, 1,350 (51%) were for murder. This verdict was more common for males, with over half of men (1,271 cases, 53%) and around a third of women (79 cases, 30%) receiving this outcome. There were 1,309 (49%) manslaughter verdicts, including 106 (4%) for manslaughter section 2, diminished responsibility.

Unfit to plead

There were nine cases in which the defendant was found unfit to plead. Eight received a hospital disposal.

Not guilty by reason of insanity

Five cases were found to be legally "insane", all of whom received a hospital disposal.

Infanticide

One hundred and ten (4%) perpetrators killed an infant, 36 (33%) were women. Of these women, only 11 (31%) were convicted of infanticide. Six had severe mental illness (schizophrenia or affective disorder) and only 1 had previous contact with mental health services in the last 12 months.

Nine (82%) with an infanticide verdict received a non-custodial sentence. Of the remaining 25 women who killed an infant, 6 were considered to be mentally ill at the time of the offence. Two received a verdict of manslaughter section 2, diminished responsibility.

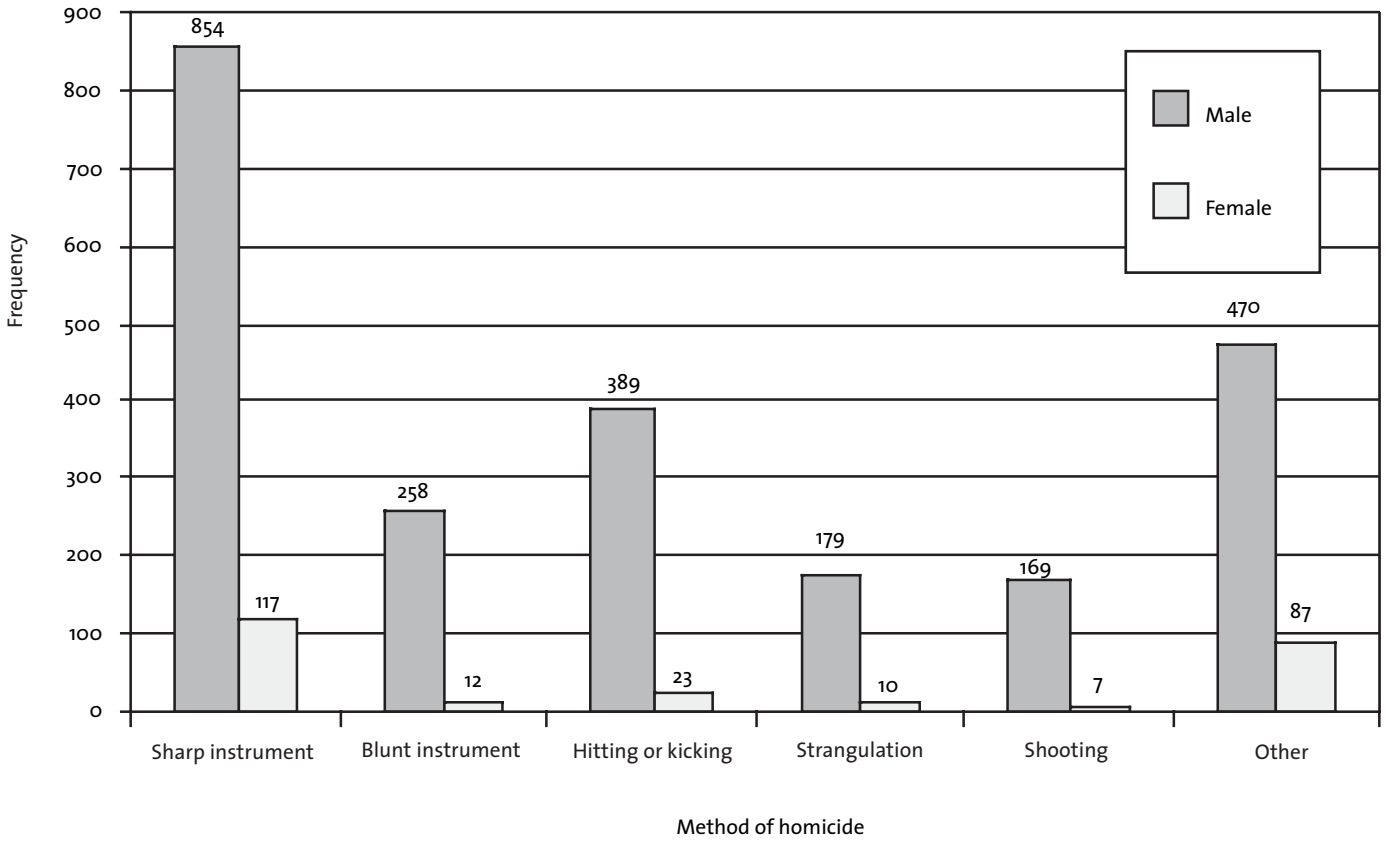
Disposal

One hundred and fifty four (6%) perpetrators were committed to psychiatric hospital and 139 (5%) received a non-custodial sentence. Women and older perpetrators (over 65) were less likely to receive a prison sentence and were more commonly placed on a hospital or community rehabilitation order.

Trends

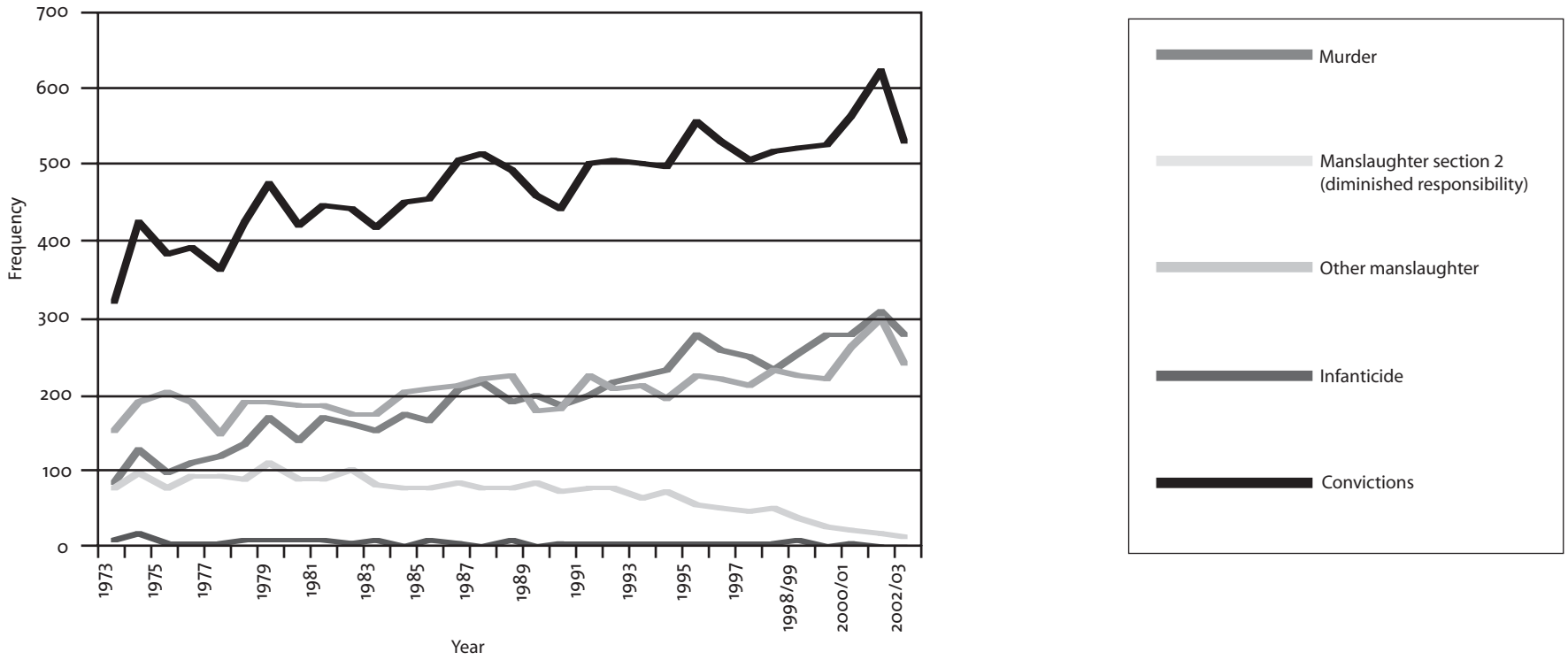
There was an increase in the number of homicide convictions from 1973-2003 (Figure 27). Over the same period, there was a downward trend in manslaughter section 2 (diminished responsibility) verdicts but infanticide convictions have remained stable.

Figure 26: General population homicides: method of homicide by sex of perpetrator



OTHER	MALE	FEMALE
Suffocation	67	16
Poisoning	51	22
Drowning	29	5
Causing to fall	105	4
Burning or scalding	10	2
Struck by motor vehicle	49	2
Miscellaneous	159	36
TOTAL	**470**	**87**

Figure 27: Number of homicide convictions (1973-2003)



4.2. What proportion of perpetrators are mentally ill?

Rates 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 18). Definitions can be based on:

- Mental illness at the time of the offence
- Manslaughter section 2 (diminished responsibility)
- Commitment to psychiatric hospital
- Lifetime diagnosis of mental disorder
- Specific diagnostic groups (e.g. schizophrenia)
- Contact with mental health services

Rate of mental illness at the time of the offence

Two hundred and sixty-one (10%) perpetrators were described in psychiatric reports as having mental illness at the time of the offence (referred to as the mentally ill group). There were 104 (40%) perpetrators with a lifetime diagnosis of schizophrenia and 97 (37%) with affective disorder. Only one third (87 cases, 33%) of the mentally ill group had been in contact with mental health services in the previous year.

Table 18: Rates of mental disorder in all perpetrators convicted of homicide

Definitions	Number (2,684)	%	(95% CI)
Mental illness at the time of the offence[6]	261	10	(9-11)
Convicted of manslaughter section 2 (diminished responsibility)	106	4	(3-5)
Commitment to psychiatric hospital (hospital order)	154	6	(5-7)
Lifetime mental disorder	806	30	(28-32)
Schizophrenia (lifetime)	141	5	(4-6)
Contact with mental health services (lifetime)	486	18	(17-20)
Contact with mental health services within 12 months of the offence	249	9	(8-10)

[6]Mental illness at the time of offence was calculated using data obtained from psychiatric reports (1,323 cases).

One hundred and thirty-five (53%) had delusions, hallucinations or both at the time of the homicide, indicating psychotic illness. Symptoms of depression were present in 147 (57%) cases. Most of those with symptoms of depression had a lifetime diagnosis of affective disorder (93 cases, 64%).

The social characteristics of the mentally ill group were similar to those of the remaining sample (Table 19). Their methods of homicide were similar though they were significantly more likely to use a sharp instrument. Their victims were more likely to be a family member or current or former spouse/partner (177 cases, 68% v. 335 cases, 37%) and less likely to be an acquaintance (46 cases, 18% v. 292 cases, 32%) or a stranger. They had a lower rate of previous convictions for violence against the person and lower rates of alcohol misuse.

The number of male and female mentally ill perpetrators is shown in Figure 28. Data show a possible recent rise in the case of males with mental illness.

Figure 28: Frequency of perpetrators with mental illness at the time of the offence by sex (1997-2003)

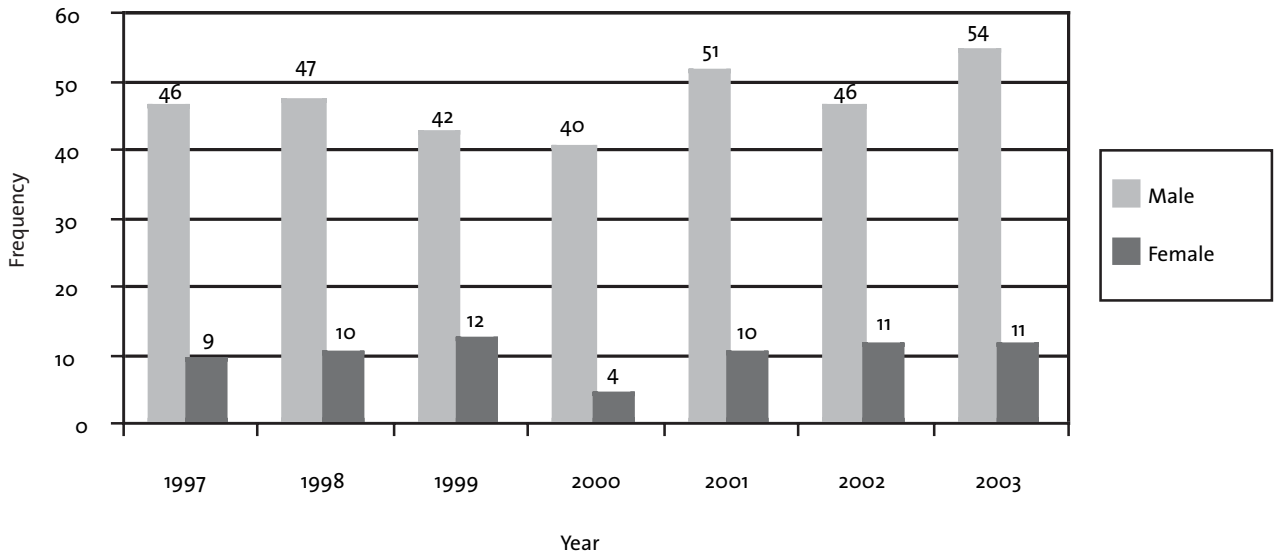


Table 19: Homicides with psychiatric reports: comparison of the social, behavioural and offence characteristics of those with and without symptoms of mental illness at the time of the homicide

	Mental illness			No mental illness			Total		
	Number (261)	%	(95% CI)	Number (915)	%	(95% CI)	Number (1,176)	%	(95%CI)
Demographic features									
Age of perpetrator: median (range)	35 (14-87)	-	-	29 (12-82)	-	-	30 (12-87)	-	-
Male perpetrator	218	84	(79-88)	810	89	(86-91)	1028	87	(86-89)
Ethnic minority	67	26	(21-32)	144	16	(14-19)	211	18	(16-21) **
Not currently married	143	57	(51-64)	490	58	(55-62)	633	58	(55-61)
Unemployed	118	48	(42-54)	384	48	(44-52)	502	48	(45-51)
Long-term sick	18	7	(4-11)	43	5	(4-7)	61	6	(4-7)
Living alone	48	21	(16-26)	137	18	(15-21)	185	19	(16-21)
Homeless	10	4	(2-7)	18	2	(1-4)	28	3	(2-4)
Behavioural features									
History of alcohol misuse	104	42	(36-49)	441	53	(49-56)	545	50	(47-53) **
History of drug misuse	113	46	(39-52)	429	50	(46-53)	542	49	(46-52)
Previous convictions for violence	59	23	(18-28)	360	40	(37-43)	419	36	(33-39) **
Contact with services									
Any contact (lifetime)	116	44	(38-51)	206	23	(20-25)	322	27	(25-30) **
Contact in last year	87	33	(28-39)	95	10	(8-12)	182	15	(13-18) **

** significance level <0.01

(continued overleaf)

Table 19: Homicides with psychiatric reports: comparison of the social, behavioural and offence characteristics of those with and without symptoms of mental illness at the time of the homicide (continued)

	Mental illness			No mental illness			Total		
	Number (261)	%	(95% CI)	Number (915)	%	(95% CI)	Number (1,176)	%	(95%CI)
Offence variables									
Age of victim: median (range)	39 (0-85)	-	-	34 (0-92)	-	-	35 (0-92)	-	-
Male victim	108	41	(35-47)	624	68	(65-71)	732	62	(59-65)**
Victim was a stranger	16	7	(4-10)	118	16	(13-18)	134	13	(11-16)**
Sharp instrument used	138	53	(47-59)	377	41	(38-44)	515	44	(41-47)**
Final outcome									
Murder	84	32	(27-38)	479	52	(49-56)	563	48	(45-51)**
Manslaughter section 2 (diminished responsibility)	56	21	(17-27)	33	4	(2-5)	89	8	(6-9)**
Manslaughter (other including provocation, self-defence)	111	43	(36-49)	396	43	(40-47)	507	43	(40-46)
Infanticide	4	2	(0-4)	4	0.4	(0-1)	8	1	(0-1)
Disposal									
Prison	126	48	(42-55)	843	92	(90-94)	969	82	(80-85)**
Hospital order (with or without restriction)	109	42	(36-48)	27	3	(2-4)	136	12	(10-13)**
Other	26	10	(7-14)	46	5	(4-7)	72	6	(5-7)**

** significance level <0.01

Rates of mental disorder based on verdicts of manslaughter section 2 (diminished responsibility)

One hundred and six perpetrators in the total homicide sample (4%) were convicted of manslaughter on the grounds of diminished responsibility ("manslaughter section 2") (Table 20). Women (22 cases, 21% v. 84 cases, 3%) and perpetrators over the age of 65 (6 cases, 15% v. 100 cases, 4%) were more likely to receive a diminished responsibility verdict.

One third (36 cases, 34%) had a diagnosis of schizophrenia, a fifth (22 cases, 21%) had affective disorder and 14 cases (13%) had personality disorder. Half (53 cases, 50%) had previous lifetime contact with psychiatric services and 56 cases (63%) were mentally ill at the time of the offence.

The perpetrator received a hospital disposal in 49 cases (46%). In the remaining fifty-seven cases, the disposal was prison in 42 cases (74%) and community rehabilitation order in 15 cases (26%). Not surprisingly, those receiving a hospital order were more likely to have serious mental illness and previous lifetime contact with services.

They were also more likely to be from an ethnic minority group (Table 20).

Of the 11 (34%) perpetrators who were mentally ill at the time of the offence, convicted of manslaughter section 2 yet sent to prison, eight (73%) were depressed at the time of the killing and 6 (60%) were psychotic. Six (55%) had a lifetime diagnosis of affective disorder, one case had personality disorder and the remainder had either schizophrenia (1 case), alcohol dependence (1 case) or a specified other diagnosis (2 cases).

The number of perpetrators receiving a verdict of manslaughter section 2 (diminished responsibility) between 1997 and 2003 is shown in Figure 29. There was a downward trend over this period.

Figure 29: The number of perpetrators convicted of manslaughter section 2 (diminished responsibility) by sex (1997-2003)

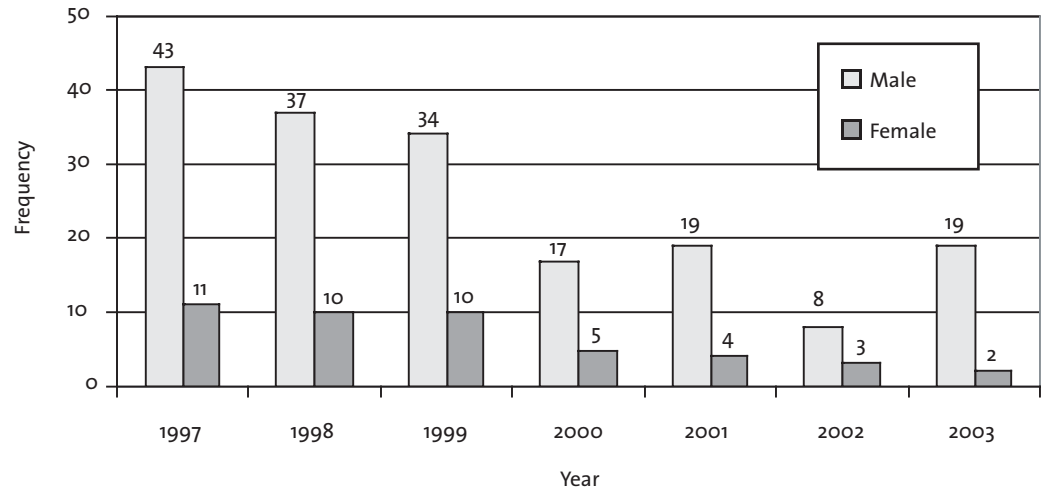


Table 20: Perpetrators receiving a verdict of manslaughter section 2 (diminished responsibility) with and without a hospital order disposal

	Manslaughter section 2, hospital order			Manslaughter section 2, other disposal		
	Number (49)	%	(95% CI)	Number (57)	%	(95% CI)
Demographic features						
Age of perpetrator: median (range)	31 (12-76)	-	-	38 (15-82)	-	-
Male perpetrator	44	90	(78-97)	40	70	(57-82)*
Ethnic minority	14	29	(17-43)	5	9	(3-20)**
Not currently married	34	74	(59-86)	15	34	(20-50)**
Unemployed	21	46	(31-61)	18	41	(26-57)
Living alone	14	31	(18-47)	5	12	(4-25) *
Behavioural features						
History of alcohol misuse	16	37	(23-53)	24	55	(39-70)
History of drug misuse	20	45	(30-61)	19	46	(31-63)
Previous convictions for violence	13	27	(15-41)	16	28	(17-42)
Clinical features						
Mentally ill at the time of the offence	37	80	(66-91)	19	44	(29-60)**
Lifetime mental illness	47	96	(86-100)	45	79	(66-87) *

** significance level <0.01 * significance level <0.05

(continued overleaf)

Table 20: Perpetrators receiving a verdict of manslaughter section 2 (diminished responsibility) with and without a hospital order disposal (continued)

	Manslaughter section 2, hospital order			Manslaughter section 2, other disposal		
	Number (49)	%	(95% CI)	Number (57)	%	(95% CI)
Contact with services						
Any contact (lifetime)	30	61	(46-75)	23	40	(28-54) *
Contact in last year	23	47	(33-62)	14	25	(14-38)*
Primary diagnosis						
Schizophrenia & other delusional disorders	32	65	(50-78)	4	7	(2-17)**
Affective disorder (bipolar disorder & depression)	4	8	(2-20)	18	32	(20-45)**
Alcohol dependence	0	0		7	12	(5-24)
Personality disorder	4	8	(2-20)	10	18	(9-30)
Offence variables						
Age of victim: median (range)	42 (0-85)	-	-	43 (0-92)	-	-
Male victim	24	49	(34-64)	31	54	(41-68)
Victim was a stranger	5	11	(4-24)	0	0	
Sharp instrument used	32	65	(50-78)	30	53	(39-66)

** significance level <0.01 * significance level <0.05

Rates of mental disorder based upon commitment to psychiatric hospital

One hundred and fifty-four (6%) perpetrators were given a hospital order. Women (23 cases, 9% v. 131 cases, 5%) and those aged over 65 (6 cases, 15% v. 148 cases, 6%) were more likely to receive this outcome. Virtually all (140 cases, 91%) had a lifetime history of mental disorder and 46% (71 cases) were in contact with psychiatric services in the 12 months prior to the offence. The most common primary diagnosis (Figure 30) was schizophrenia (98 cases, 71%). In a fifth of cases (27 cases, 20%), the perpetrator was not mentally ill at the time of the offence, 8 (30%) of these had a primary diagnosis of schizophrenia, 6 (22%) personality disorder and 1 (4%) affective disorder.

The number of homicide perpetrators who received a hospital disposal between 1997 and 2003 are shown in Figure 31. The figures show no consistent change. Data on all perpetrators' disposal from court is supplied by the Home Office. Therefore this information is not reliant on information obtained from psychiatric reports. However, to receive a hospital disposal, psychiatric evidence is required. If fewer psychiatrists are seeing offenders, then the number of people receiving a hospital disposal may decrease.

Figure 30: Primary diagnoses of perpetrators committed to hospital

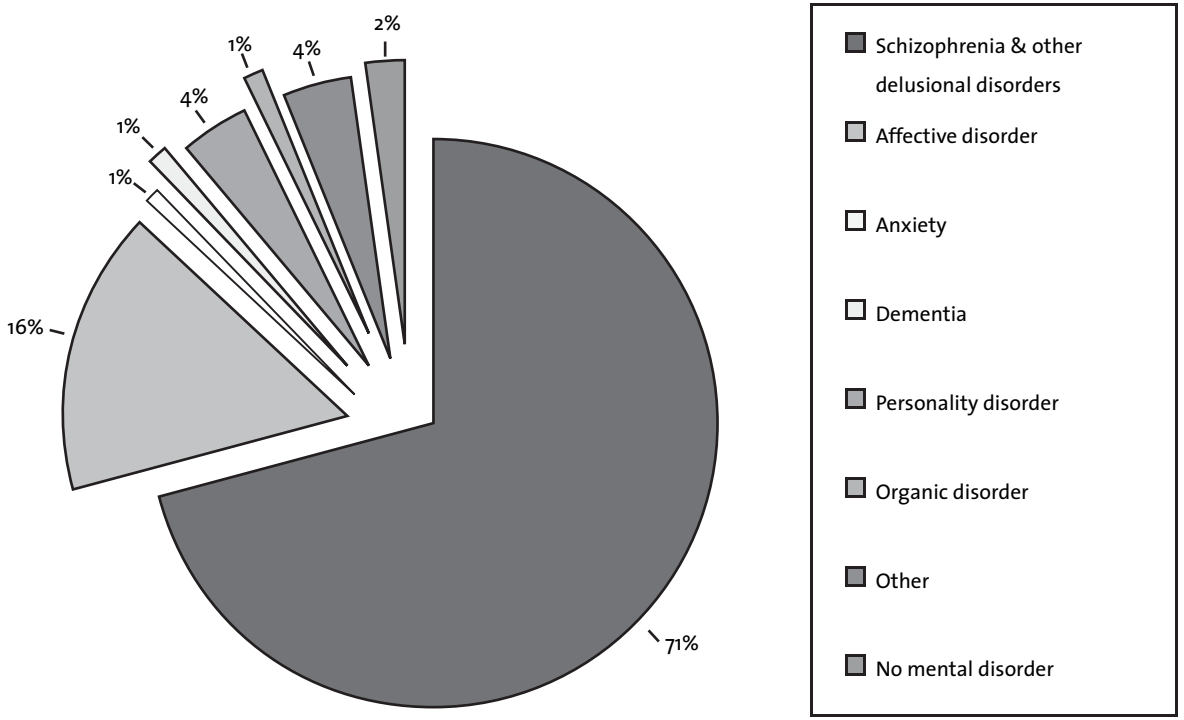
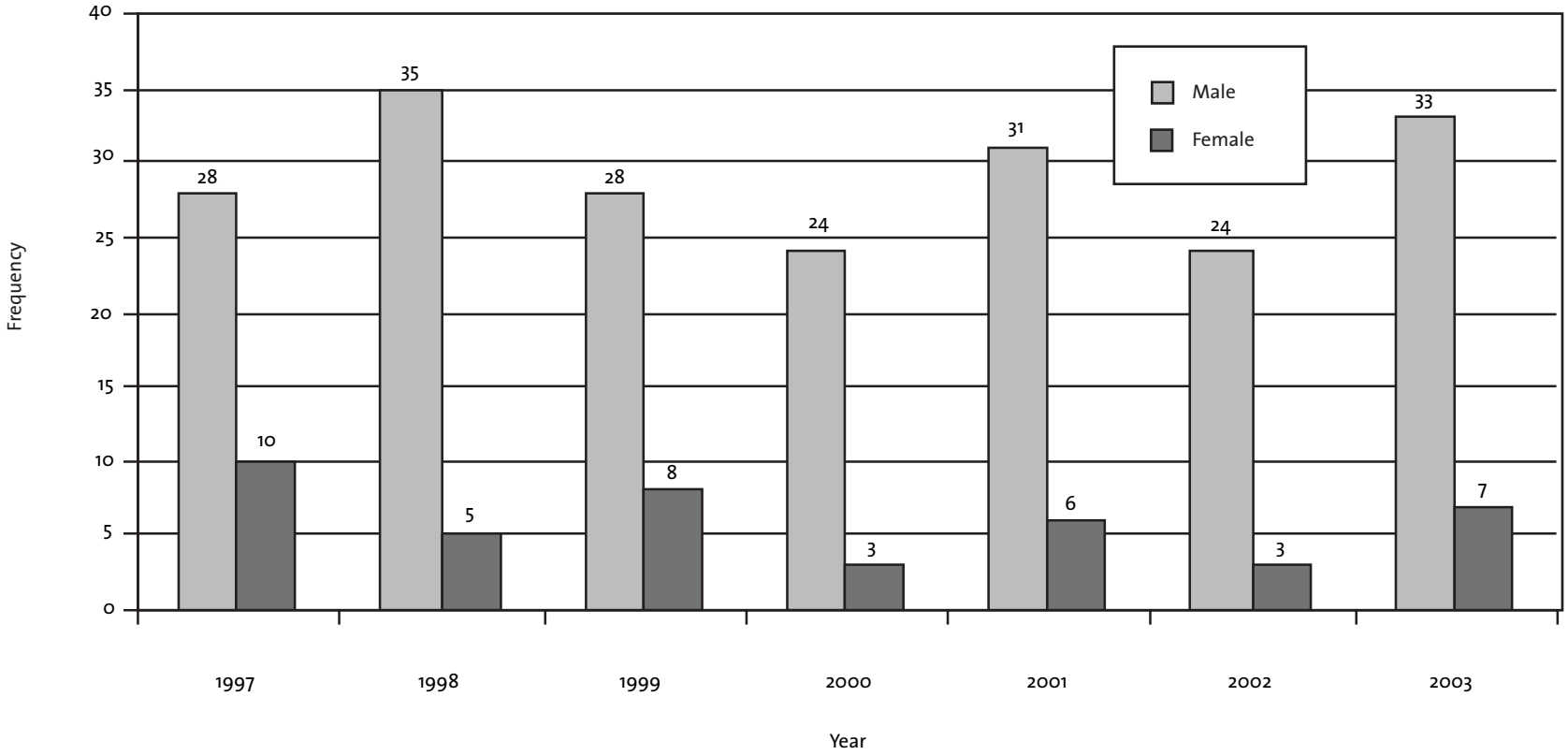


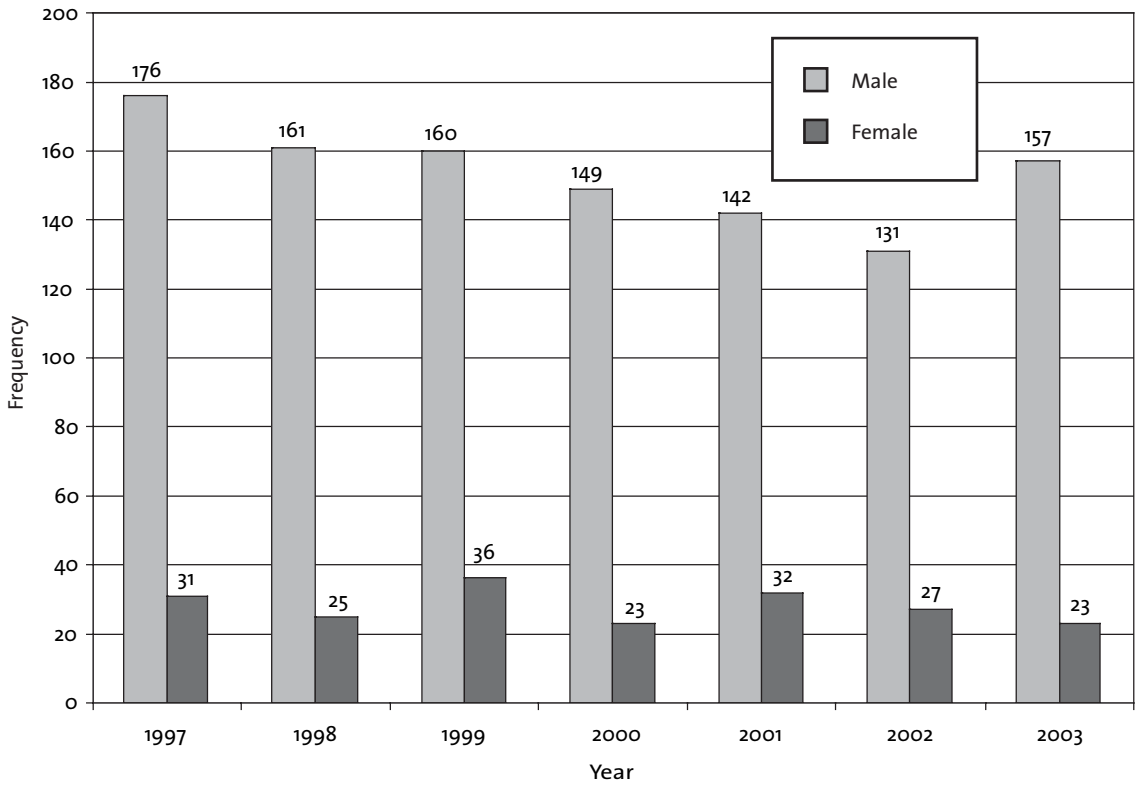
Figure 31: The number of perpetrators receiving a hospital disposal by sex (1997-2003)



Perpetrators with a lifetime history of mental disorder

In 806 cases (30% of the total homicide sample), a diagnosis of mental disorder was specified in the psychiatric report or by services, based on lifetime history. One hundred and forty-one (18%) had schizophrenia, 146 (18%) had affective disorder, 216 (27%) had alcohol or drug dependence and 146 (18%) personality disorder. The number of perpetrators with a lifetime history of mental illness is shown in Figure 32. Analysis showed a downward trend for males. Data on lifetime history of mental illness comes from both psychiatric reports and NHS trusts. The method of data ascertainment from NHS trusts has remained unchanged but the proportion with psychiatric reports has dropped (see method section page 25). It is unclear whether the apparent reduction in lifetime history of mental disorder was a true reflection of change or whether it related to the reduction in the proportion with reports.

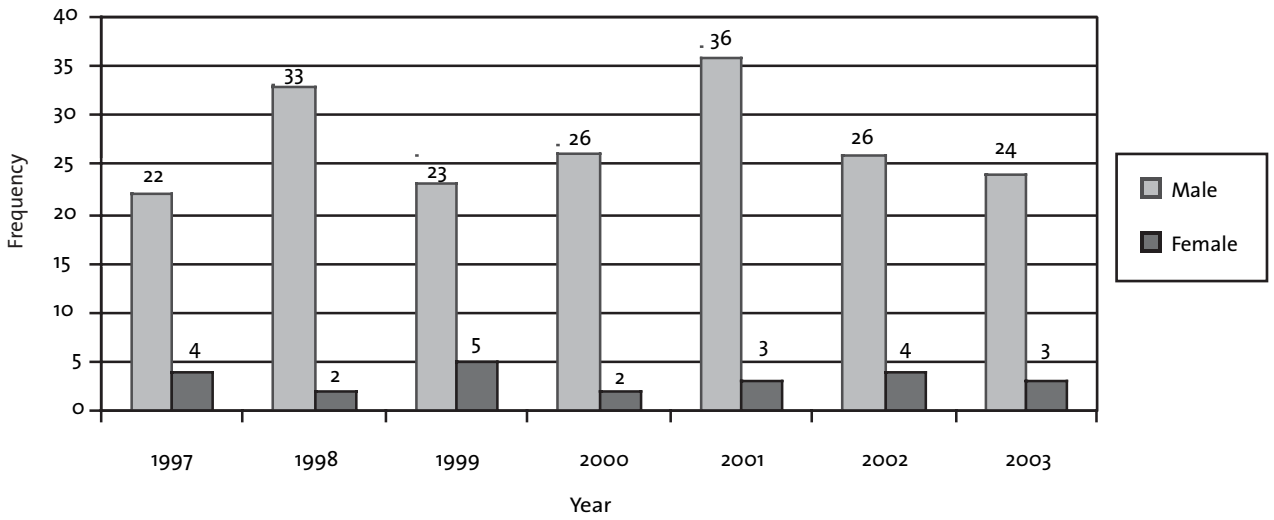
Figure 32: The number of perpetrators with a lifetime history of mental disorder by sex (1997-2003)



Perpetrators with a lifetime history of schizophrenia

There were 141 perpetrators with a history of schizophrenia, 5% of the total homicide sample. A lifetime history of schizophrenia was specified in either the psychiatric reports or by services in the Inquiry questionnaire. The number of perpetrators with a lifetime history of schizophrenia is shown in Figure 33. There were no changes during the time period. However, there was a fall in the number receiving a verdict of manslaughter section 2 (diminished responsibility). There was no change in the number of perpetrators with schizophrenia receiving a hospital order.

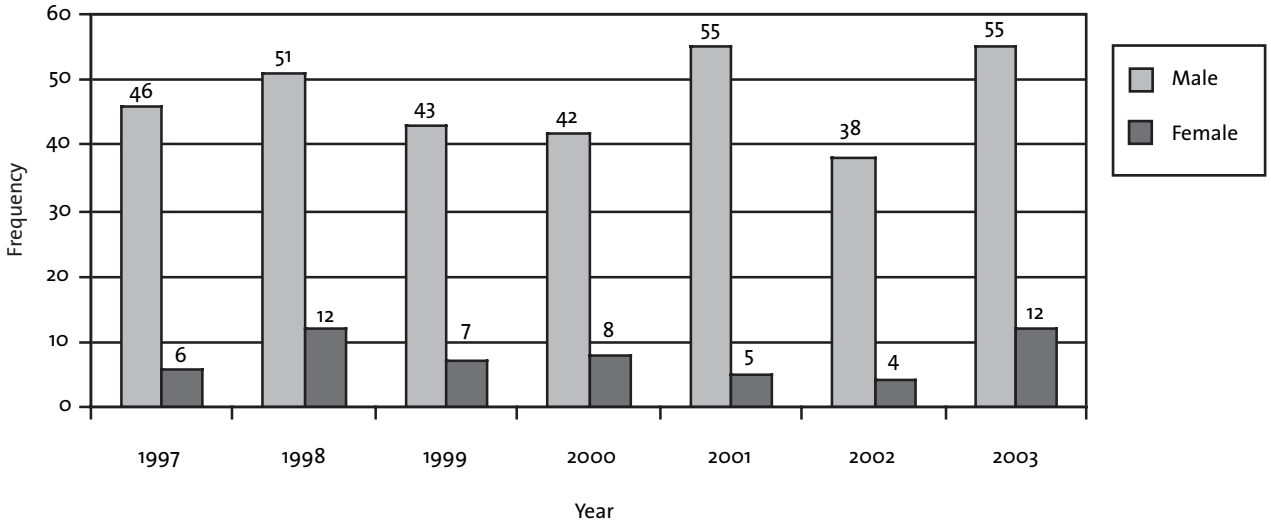
Figure 33: The number of homicide perpetrators with a lifetime history of schizophrenia by sex (1997-2003)



Inquiry cases in contact with services within 12 months of the offence

Of the 486 questionnaires sent to consultant psychiatrists, we received completed questionnaires on 451 cases, a response rate of 93%. We were notified in 26 cases that the case notes had been lost or data were unobtainable. Two hundred and forty-nine (9%) perpetrators were known to have had contact with mental health services in the 12 months before the offence. This equates to 52 cases per year during the study period. The number in each year (1997-2003) is shown in Figure 34. There was no consistent change.

Figure 34: The number of perpetrators in recent contact with services by sex (1997-2003)



4.3. Who are the patients who were convicted of homicide?

Two hundred and forty-nine people (9%) convicted of homicide during the time period April 1999-December 2003 were in contact with mental health services in the 12 months prior to the offence. There were a further 134 people in whom mental health service contact was referred to in the psychiatric reports but not confirmed by extensive enquiry. In many of these cases contact was said to have occurred many years before the homicide. We will describe the findings on those who had contact with services in the 12 months prior to the offence (Inquiry cases).

In most of the Inquiry cases (182 cases, 74%), the responsible service was a general psychiatry service rather than a specialist service. Thirty-four (14%) had been under alcohol and drug services, 11 (4%) under forensic psychiatry services and 6 (2%) under child and adolescent services. A multidisciplinary review was conducted after the homicide on 125 (53%) patients in contact within a year. In 67 cases (30%) services had contact with the family or relatives of the perpetrator after the offence.

Table 21: Social, clinical, offence characteristics and final outcome in court for perpetrators convicted of homicide who had contact with mental health services in the 12 months prior to the offence

	Contact within 12 months		
	Number (249)	%	(95% CI)
Demographic features			
Age of perpetrator: median (range)	31 (15-80)	-	-
Male perpetrator	216	87	(82-91)
Ethnic minority	44	19	(14-25)
Not currently married	165	71	(64-76)
Unemployed	143	62	(55-68)
Long-term sick	27	12	(8-17)
Living alone	82	37	(31-44)
Homeless	12	6	(3-9)
Priority groups			
Under enhanced CPA	67	27	(22-33)
Missed last contact	90	39	(33-46)
Non-compliance in the last month	53	25	(19-32)
Clinical features			
Primary diagnosis (lifetime):			
Schizophrenia & other delusional disorders	74	30	(24-35)
Affective disorder (bipolar disorder & depression)	37	15	(11-19)
Alcohol dependence	36	14	(10-19)
Drug dependence	28	11	(7-15)
Personality disorder	42	17	(12-22)
Lifetime mental illness	240	96	(93-98)
Mentally ill at the time of the offence	87	48	(40-55)

(continued overleaf)

Social characteristics

The social and clinical characteristics of the Inquiry cases are shown in Table 21. As with homicides in the general population, most perpetrators were male, single and unemployed. Twelve perpetrators were homeless.

Clinical features

A breakdown of primary diagnoses is given in Figure 35. The most common diagnosis was schizophrenia. Less than half (111 cases, 45%) had severe mental illness (schizophrenia or affective disorder). One hundred and twenty-nine (52%) also had at least one secondary diagnosis (Figure 36), the most common being drug dependence, personality disorder, alcohol dependence and affective disorder. In 45 cases (20%) the onset of mental disorder had been in the previous year. In 120 cases (52%) it had been more than five years earlier, reflecting the long-term nature of the main primary diagnoses. Despite this, 38 cases (32%) had never been admitted to hospital, a further indication that most did not have severe mental illness in the conventional sense. Seventy-five (31%) had previous admissions under the Mental Health Act.

Table 21: Social, clinical, offence characteristics and final outcome in court for perpetrators convicted of homicide who had contact with mental health services in the 12 months prior to the offence (continued)

	Contact within 12 months		
	Number (249)	%	(95% CI)
Offence variables			
Age of victim: median (range)	38 (0-86)	-	-
Male victim	149	60	(53-66)
Victim was a stranger	24	11	(7-16)
Victim was a family member	42	17	(12-22)
Victim was a current or former spouse/partner	69	28	(22-34)
Victim was an acquaintance	70	28	(23-34)
Blunt instrument used	26	10	(7-15)
Final outcome			
Murder	102	41	(35-47)
Manslaughter section 2 (diminished responsibility)	37	15	(11-20)
Manslaughter (other including provocation, self defence)	104	42	(36-48)
Infanticide	1	0.4	(0-2)
Disposal			
Prison	170	68	(62-74)
Hospital order (with or without restriction)	71	29	(23-35)
Non-custodial	11	4	(2-8)

There were high rates of alcohol and drug misuse, with 85% (167 cases) of the sample known to be misusing alcohol and/or drugs. Seventy-three cases (29%) had a dual diagnosis (severe mental illness and alcohol/drug misuse or dependence).

Forty-six (23%) had previously been under the care of mental health services in another district. In 6 of these cases no written details about the patient were passed between hospitals. Of the 6, 1 case was diagnosed as suffering from schizophrenia, 2 cases with personality disorder, 2 cases with alcohol or drug dependence and 1 case was unspecified.

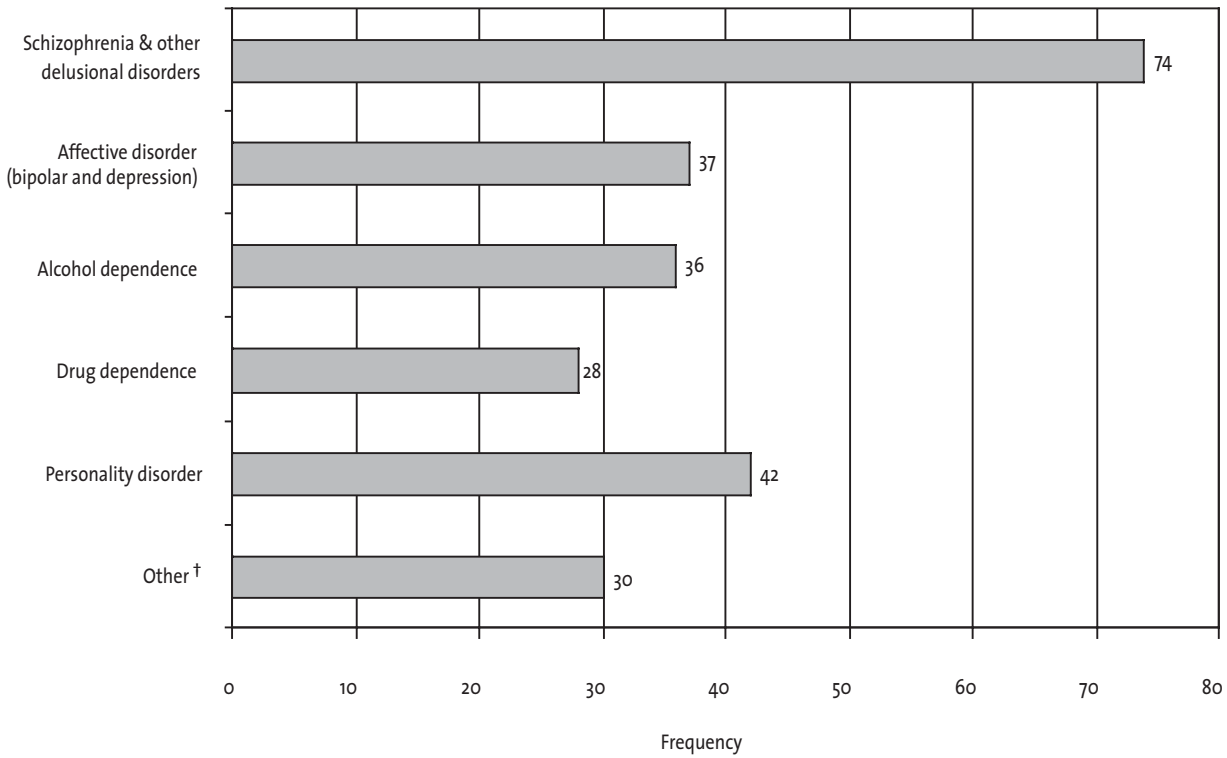
Offence details

The most common method of homicide was using a sharp instrument (117 cases, 47%). Victims were most often a family member or current or former spouse/partner (111 cases, 45%). In 24 cases (11%) the victim was unknown to the perpetrator.

Previous violence

One hundred and three (46%) perpetrators who had contact with services in the 12 months prior to the offence had a history of violence towards another person documented in the case notes. Fifty-seven of these were known to have previous convictions for violence against the person.

Figure 35: Primary diagnosis of perpetrators in contact with services in the 12 months prior to the offence



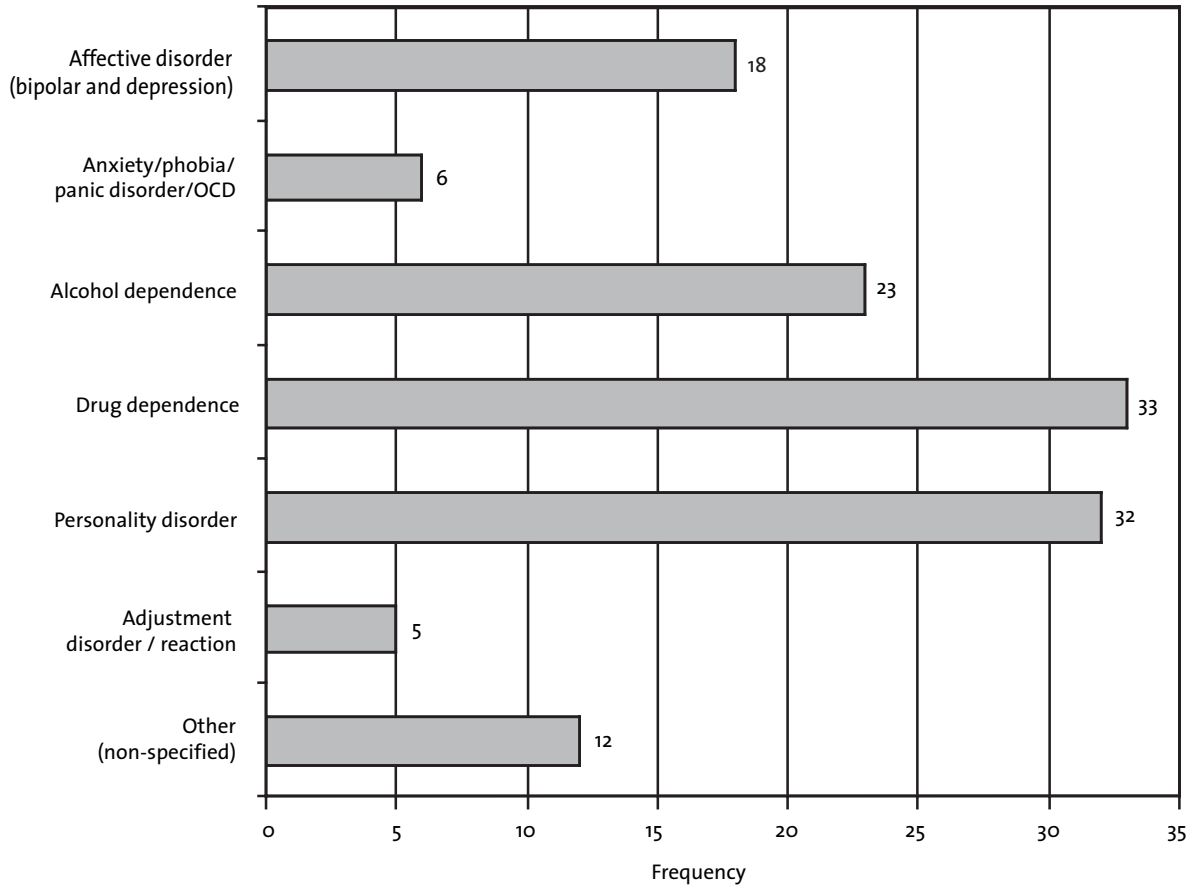
†Other diagnoses include anxiety/phobia/panic disorder/obsessive compulsive disorder, adjustment disorder/ reaction and other non-specified

There were a further 41 cases with previous convictions for violence, but no documentation of this in the notes. Of the 41, 22 had a serious mental illness and 17 of these were mentally ill at the time of the offence. Those who had contact with services in the 12 months prior to the offence also had a high rate of documented recent violence: 81 had either committed at least one physical assault against another person in the year before the homicide (50 cases) or made threats of homicide or serious violence (51 cases). Forty-six (57%) had serious mental illness, of whom 31 (67%) were subject to enhanced CPA, 20 (49%) were non-compliant with medication and 16 (42%) had missed their last appointment with services. Eight homicides were committed by patients who had previously been on a restriction order because of a violent offence.

In-patient homicides

Fifteen perpetrators were in-patients at the time of the offence (12 on a general psychiatry open ward, 3 on a psychiatric intensive ward). Eight had a primary diagnosis of schizophrenia, 3 had affective disorder, 2 had personality disorder, 1 had adjustment disorder and 1 had organic disorder. Eight (53%) victims were family members or current or former spouse/partners, 6 (40%) were friends or acquaintances and 1 was a prostitute.

Figure 36: Secondary diagnosis of perpetrators in contact with services in the 12 months prior to the offence



The relationship was unknown for 1 case. Three had previous convictions for violent offences, all of which had been documented in the case notes. In 2 cases, there had been an assault on a fellow patient and a staff member within the same admission. Six in-patients were detained under the Mental Health Act.

In 7 cases the homicide took place during the period of planning discharge, 4 were off the ward with staff agreement and 2 without staff agreement. Three homicides took place on the hospital ward, 1 in the hospital grounds and the remainder at a distance from the hospital. At last contact, immediate risk of violence was thought to be absent or low in 12 cases. In the 2 cases where risk was considered moderate, the patients were off the ward without staff agreement. Compared to those who had contact with services in the 12 months prior to the offence, in-patient homicides were more likely to have a primary diagnosis of schizophrenia (9 cases, 60% v. 65 cases, 28%) and were more likely to be detained under the Mental Health Act (13 cases, 87% v. 62 cases, 27%). Multiple previous admissions were common (4 cases, 27%) and significantly more had previously been admitted to a psychiatric intensive care unit (8 cases, 53% v. 21 cases, 9%) compared with homicides in 12 month contact.

Homicides within 3 months of hospital discharge

In 43 cases (18%) the homicide took place within 3 months of discharge from psychiatric in-patient care. Figure 37 shows the timing of the homicide. There was no peak immediately following discharge (unlike for suicide cases). Clinical and behavioural characteristics in this group were similar to those who had contact in the 12 months prior to the offence as a whole. However, they were more likely to have had multiple previous admissions and to have initiated their own discharge (either by self-discharge or discharge for breach of ward rules; 17 cases).

Two (5%) were under Section 25, i.e. supervised discharge. Most had a follow-up appointment arranged on discharge but compared with those who had contact in the 12 months prior to the offence as a whole, the homicide was more likely to take place before the first follow-up appointment (6 cases, 15% v. 1 case, 1%). The post-discharge homicides were more likely than other homicides to be under enhanced CPA (17 cases, 40% v. 41 cases, 22%). Fewer showed signs of mental illness at last contact with services (18 cases, 43% v. 113 cases, 62%) compared with the homicides in 12 month contact.

Care arrangements

Only 67 patients (27%) were subject to multidisciplinary review under enhanced CPA. These perpetrators were more likely to be from an ethnic minority group and more likely to have severe mental illness compared with those not under enhanced CPA.

One hundred and forty-five (66%) people were receiving some form of pharmacotherapy, but only 21% were regarded as receiving any form of psychological intervention, including psychological support. Of the 145, 75 (52%) were either non-compliant with medication or had lost contact with services at the time of the homicide.

Ninety (39%) people missed their last appointment with services. They were more likely to be non-compliant with medication and more often lived alone. Their victims were more likely to be strangers and less likely to be a family member or current or former spouse/partner.

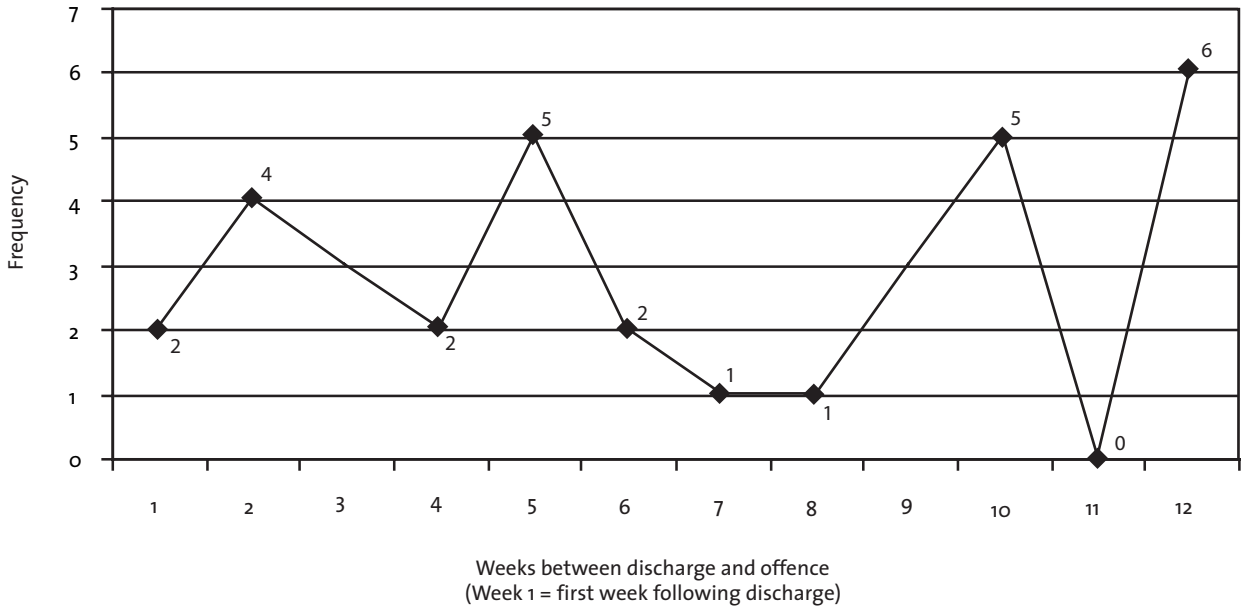
Fifty three (25%) perpetrators were non-compliant with medication in the month preceding the offence. These cases were more likely to have a primary diagnosis of schizophrenia. They were more likely to be under enhanced CPA and more likely to have missed their last appointment with services.

Figures from 1997 to 2003 showed no consistent change over time in the number of perpetrators who were either non-compliant with medication or who had missed their last appointment with services.

Last contact

The timing of last contact with mental health services before the homicide is shown in Figure 38. In 189 cases (77%) the last contact occurred less than thirteen weeks before the homicide and in 71 (29%) cases this was within one week. In 161 (66%) cases it was a routine contact.

Figure 37: Number of homicide cases per week following discharge



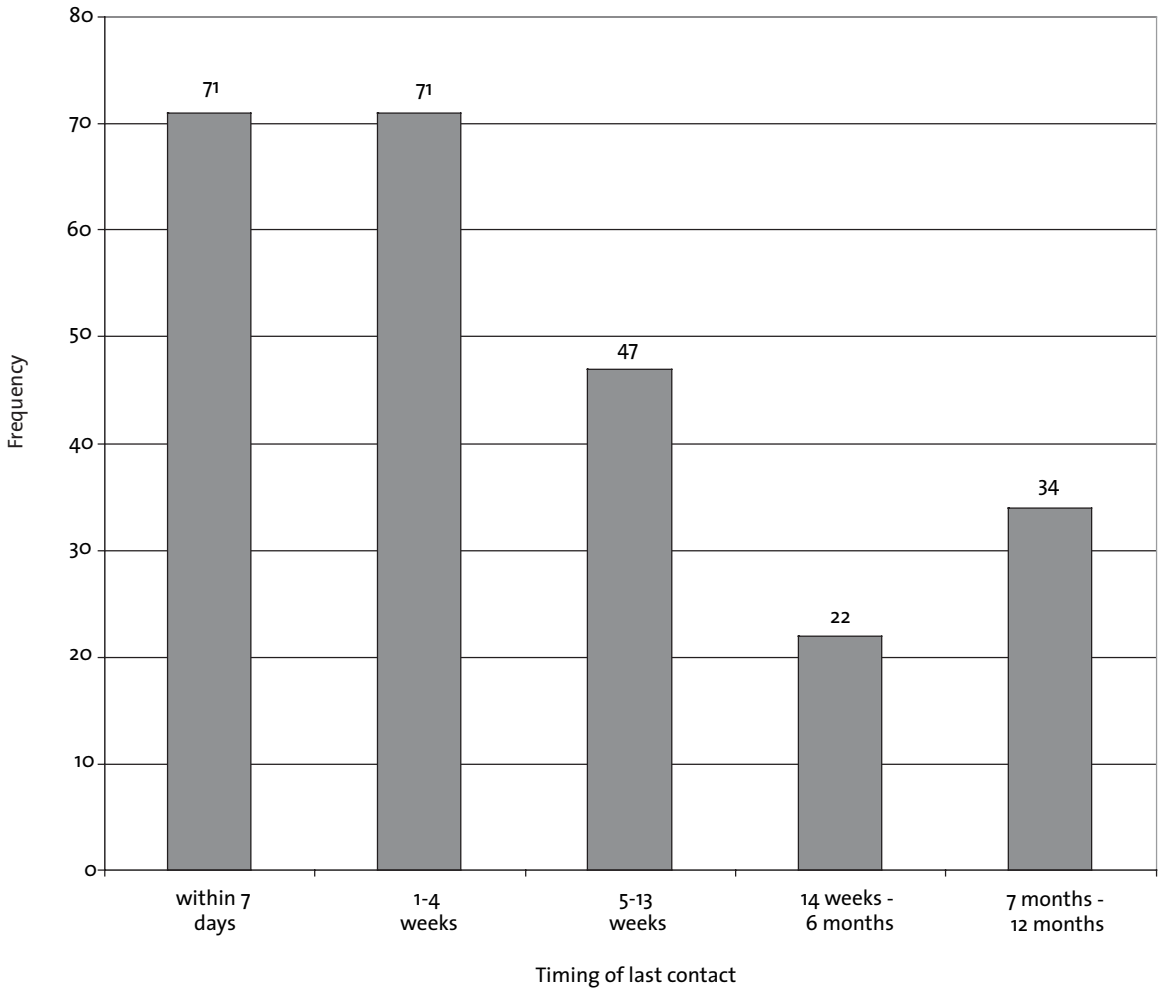
4.4. Which people with schizophrenia commit homicide?

One hundred and forty-one (5%) people with schizophrenia committed homicide. Of these, 74 (52%) had been in contact with services in the last year, 18 (13%) had previous contact but not in the last 12 months and 49 (35%) had no previous contact with services (Table 22).

Patients with schizophrenia in contact with mental health services

Of the 74 people in contact with mental health services within the last 12 months (Table 22), 70 (95%) had been diagnosed as having schizophrenia by services. The diagnoses of the remainder (so called disputed cases) were: affective disorder (1 case), alcohol dependence (1 case), personality disorder (1 case) and organic disorder (1 case).

Figure 38: Timing of last contact with mental health services



Social and clinical characteristics

A high proportion were unmarried (41 cases, 64%) and unemployed (45 cases, 71%). Twenty-eight (38%) were from an ethnic minority group. Thirteen (18%) had a secondary diagnosis, mainly personality disorder (4 cases, 31%) and substance dependence (5 cases, 38%). Thirty (49%) had a history of alcohol misuse and 47 (72%) had previously misused drugs.

Previous violence

Forty cases (57%) had a history of violence against the person documented in the case notes. Twenty-two (55%) of these were known to have previous convictions for violence against the person and this was documented in the case notes in all cases. A further 6 had previous convictions for violence not documented in the case notes. Sixteen had previous convictions for threatening behaviour, 10 of which were documented in the case notes.

In 32 cases there had been a known previous violent incident (actual or threatened) during an episode of psychosis. Eighteen (72%)[7] of these were psychotic at the time of the homicide.

Care arrangements

Sixty-six (89%) had previously been admitted to hospital, 55 (74%) had previously been detained under the Mental Health Act. Twenty-eight (38%) had previously been admitted to a type of secure facility: 4 to a high secure hospital, 14 to a regional secure unit and 21 to a general psychiatry intensive care ward. Nine individuals were in-patients at the time of the homicide. Forty-eight (66%) were under the higher levels of supervision of the enhanced CPA including 18 of those with previous convictions for violence. Those under enhanced CPA were more likely to have previous violence reported in the case notes and were more likely to have been in contact with services within 7 days of the offence. Thirty-one (46%) were non-compliant with medication in the month before the homicide, including 14 with a previous history of violence. Twenty-six (40%) missed their final appointment with services prior to the offence.

Last contact

Thirty-two (44%) patients had their last service contact less than a week before the homicide. Fifty-six (77%) patients were seen within one month of the homicide. Fifty-three (83%) were thought to be at low short-term risk of violence at last contact.

Preventability

According to clinicians, 23 (33%) of the homicides were thought to be preventable. These homicides were characterised by high rates of non-compliance with medication (10 cases, 45%), drug and alcohol misuse (18 cases, 90%) and symptoms of mental illness at the time of the offence (13 cases, 59%). However, the risk of immediate violence assessed at last contact was estimated as either low or absent in 16 (80%) or not considered in 3 out of 23 in this group.

Offence details

Nineteen (39%) killed a family member, 12 (24%) killed a current or former spouse/partner and 9 (14%) killed a stranger. This proportion was significantly lower than for the general homicide sample. Fifty-one (80%) were mentally ill at the time of the offence. Eighteen (24%) received a manslaughter section 2 (diminished responsibility) verdict and 53 (72%) a hospital disposal.

[7]Data was only collected on 25 perpetrators for this question.

Table 22: Social, behavioural, clinical and offence characteristics of perpetrators with schizophrenia and their contact with services

	No contact			Contact within 12 months			Lost contact		
	Number (49)	%	(95 % CI)	Number (74)	%	(95 % CI)	Number (18)	%	(95 % CI)
Demographic features									
Age of perpetrator: median (range)	33 (17-76)	-	-	30 (19-80)	-	-	38 (18-74)	-	-
Male perpetrator	42	86	(73-94)	67	91	(81-96)	16	89	(65-99)
Ethnic minority	24	49	(34-64)	28	38	(27-50)	1	6	(0-27) **
Not currently married	33	70	(56-83)	41	64	(51-76)	11	85	(55-98)
Unemployed	34	74	(59-86)	45	71	(59-82)	6	43	(18-71)
Long-term sick	4	9	(2-21)	7	11	(5-22)	2	14	(2-43)
Living alone	9	19	(9-33)	16	27	(16-40)	5	42	(15-72)
Homeless	3	6	(1-17)	0	0		2	17	(2-48)*
Behavioural features									
History of alcohol misuse	13	28	(16-44)	30	49	(36-62)	7	50	(23-77)
History of drug misuse	19	41	(27-57)	47	72	(60-83)	6	43	(18-71)**
Previous convictions for violence	13	27	(15-41)	30	42	(30-54)	8	44	(22-69)
Mental state									
Mentally ill at the time of the offence	41	95	(84-99)	51	80	(68-89)	12	86	(57-98)
Psychotic at the time of the offence	41	95	(84-99)	48	81	(69-90)	11	85	(55-98)
Delusions	33	77	(61-88)	45	76	(63-86)	10	77	(46-95)
Hallucinations	22	54	(37-69)	29	53	(39-66)	4	36	(11-69)

** significance level <0.01 *significance level <0.05

(continued overleaf)

Table 22: Social, behavioural, clinical and offence characteristics of perpetrators with schizophrenia and their contact with services (continued)

	No contact			Contact within 12 months			Lost contact		
	Number (49)	%	(95 % CI)	Number (74)	%	(95 % CI)	Number (18)	%	(95 % CI)
Offence variables									
Age of victim: median (range)	40 (0-80)	-	-	40 (0-84)	-	-	37 (2-85)	-	-
Male victim	20	41	(27-56)	37	50	(38-62)	13	72	(47-90)
Victim was a current or former spouse/partner	12	24	(13-39)	16	22	(13-33)	4	22	(6-48)
Victim was a family member	19	39	(25-54)	21	28	(19-40)	6	33	(13-59)
Victim was a stranger	4	9	(2-21)	9	14	(7-25)			
Sharp instrument used	25	51	(36-66)	42	57	(45-68)	9	50	(26-74)
Final outcome									
Murder	8	16	(7-30)	22	30	(20-41)	8	44	(22-69)
Manslaughter section 2 (diminished responsibility)	13	27	(15-41)	18	24	(15-36)	5	28	(10-53)
Manslaughter (other including provocation, self-defence)	23	47	(33-62)	29	39	(28-51)	5	28	(10-53)
Disposal									
Prison	13	27	(15-41)	19	26	(16-37)	9	50	(26-74)
Hospital order with or without restriction	34	69	(55-82)	53	72	(60-81)	9	50	(26-74)

Lifetime schizophrenia

Eighteen (13%) perpetrators had been in previous contact with services but not in the last 12 months. They are referred to as those who have 'lost contact.' All but 4 had been diagnosed by services as having schizophrenia. The service diagnoses of the four were: affective disorder (2 cases), personality disorder (1 case) and 1 was unknown. Compared with other perpetrators with schizophrenia, those who had lost contact were less likely to have been from an ethnic minority group, more likely to have been homeless and compared to perpetrators in contact in the 12 months prior to the offence, less likely to have a history of drug misuse (Table 22).

People with schizophrenia with no previous service contact

Forty-nine (35%) perpetrators with schizophrenia had no previous contact with services. Forty-one were mentally ill at the time of the offence. They were proportionally more likely to come from an ethnic minority group compared with those in contact with services in the 12 months prior to the offence. Eight were black and 8 were Asian. Thirty-one percent (15 cases) had a secondary diagnosis, mainly alcohol dependence (3 cases, 20%) and personality disorder (5 cases, 33%).

In around a third (12 cases, 29%), the illness had been present for less than 12 months, in a further 36% (15 cases) for more than five years. Of those with recent onset, almost half (5 cases, 42%) were female and half (6 cases, 50%) were from an ethnic minority group. The victim was the offender's current or former spouse/partner or family member in all but 1 case, where the victim was a stranger. Most (10 cases, 83%) were psychotic at the time of the offence.

Those with a long history of schizophrenia (more than 5 years) (15 cases) were male, with almost half from an ethnic minority group (7 cases, 47%). In over half (9 cases, 60%) of the cases the victim was a family member or spouse, and in 2 (14%) a stranger. Most were psychotic at the time of the offence (13 cases, 93%).

Altogether 6 perpetrators had been in contact with their general practitioner in the month prior to the offence because of psychological problems, but in only three cases had a referral to secondary mental health services taken place. Three of these had been unwell for less than 12 months and 2 for over 5 years. In one case the duration of illness was unknown.

Perpetrators with schizophrenia receiving a custodial sentence

Of the total sample of people with schizophrenia (141), 41 (29%) perpetrators received a prison sentence. These were similar to those receiving a hospital order with respect to most offence-related characteristics and social and clinical variables. However, the prison group were more likely to have previous convictions for violence (26 cases, 63% v. 25 cases, 26%). They were less likely to have been mentally ill at the time of the offence (19 cases, 68% v. 85 cases, 91%) but there was no difference in the proportion of contact with services (28 cases, 68% v. 64 cases, 64%).

4.5. Which people with personality disorder commit homicide?

There were 146 (5%) people with personality disorder as a primary diagnosis in the absence of severe mental illness. Of these, 42 (29%) had been in contact with services in the last 12 months, 41 (28%) had been in contact but not in the last 12 months and 63 (43%) had no previous contact with services (Table 23). For those in whom there had been no previous service contact, personality disorder was diagnosed only if the report writer reached this diagnosis. In cases with any service contact and in whom there was a diagnostic discrepancy between report writer and services, the reports and questionnaires were individually examined to look for positive evidence of personality disorder and the absence of severe psychiatric disorder. Overall, the figure of 146 is likely to be an under-estimation of the proportion of homicides by people with personality disorder.

Patients with personality disorder

Forty-two (29%) people with personality disorder had contact with services in the 12 months prior to the offence. Thirty-two had been diagnosed as having personality disorder by services. The service diagnoses of the remainder (so called disputed cases) were: schizophrenia (2 cases), affective disorder (1 case), anxiety/phobia/panic disorder (2 cases), adjustment disorder (1 case), other diagnosis (1 case) and the diagnosis for the remaining case was unknown.

Social and clinical characteristics

Most were male (32 cases, 76%) and only 3 were from an ethnic minority group. Twenty-three (55%) had a secondary diagnosis, mainly alcohol and drug dependence. Thirty-three (97%)[8] had a history of alcohol misuse and/or drug misuse and 32 (80%)[9] had a history of self-harm.

Previous violence

Twenty-two (55%) had no previous violent convictions. Twenty-four had a history of violence against the person documented in the case notes. Eleven of these were known to have previous convictions for violence against the person. A further four had previous convictions for violence and 3 for threatening behaviour but these were not documented in the case notes.

Care arrangements

Only 8 (19%) were under the higher levels of the enhanced CPA. Six were non-compliant with treatment in the month prior to homicide and 13 missed their last appointment with services.

[8]Data were only collected on 34 perpetrators for this question.
[9]Data were only collected on 40 perpetrators for this question.

People with personality disorder with no previous service contact

Sixty-three (43%) perpetrators with personality disorder had no previous contact with services. They were proportionally more likely to be from an ethnic minority group compared with those in contact with services in the 12 months prior to the offence. Five were black and 1 was Asian. Seventeen (26%) had a secondary diagnosis, mainly alcohol dependence (7 cases, 41%). Three (7%) perpetrators had been in contact with their general practitioner in the month prior to the offence because of psychological problems, but in only 1 case had a referral to secondary mental health services taken place.

Offence details and outcome in court

Of the total sample of people with personality disorder, the victim was an acquaintance in 49 cases (34%), in 28 cases (19%) a current or former spouse/partner, in 24 cases (16%) a family member and in 18 cases (15%) a stranger.

Fourteen (10%) received a manslaughter section 2 (diminished responsibility) verdict, 134 (92%) were imprisoned, 6 (4%) were given non-custodial sentences (5 of whom were convicted of manslaughter having killed a family member) and 6 (4%) were given a hospital disposal. Seven cases diagnosed by services (Inquiry cases) as having a personality disorder were described as being mentally ill at the time of the offence by the report writers, including 3 with delusions and/or hallucinations. Two of the 7 were given a hospital disposal.

Table 23: Social, behavioural, clinical and offence characteristics of perpetrators with personality disorder and their contact with services

	No contact			Contact within 12 months			Lost contact		
	Number (63)	%	(95 % CI)	Number (42)	%	(95 % CI)	Number (41)	%	(95 % CI)
Demographic features									
Age of perpetrator: median (range)	27 (16-57)	-	-	26 (16-56)	-	-	31 (17-49)	-	-
Male suspect	55	87	(77-94)	32	76	(61-88)	35	85	(71-94)
Ethnic minority	7	11	(4-22)	3	8	(2-20)	1	3	(0-13)
Not currently married	42	76	(63-87)	22	73	(54-88)	22	63	(45-79)
Unemployed	42	75	(62-86)	18	67	(46-83)	22	67	(48-82)
Long-term sick	0	0		3	11	(2-29)	3	9	(2-24)*
Living alone	8	16	(7-29)	7	26	(11-46)	10	32	(17-51)
Homeless	4	8	(2-19)	1	3	(0-17)	1	3	(0-16)
Behavioural features									
History of alcohol misuse	32	58	(44-71)	27	87	(70-96)	22	76	(56-90)*
History of drug misuse	42	75	(62-86)	22	69	(50-84)	24	73	(54-87)
Previous convictions for violence	33	56	(42-69)	18	45	(29-62)	25	63	(46-77)
Mental state									
Mentally ill at the time of the offence	6	10	(4-21)	4	13	(4-30)	4	14	(4-32)
Psychotic at the time of the offence	3	5	(1-15)	1	3	(0-17)	2	7	(1-23)
Delusions	0	0		1	3	(0-17)	1	3	(0-18)
Hallucinations	2	4	(0-12)	1	4	(0-19)	1	3	(0-18)

*significance level <0.05

(continued overleaf)

Table 23: Social, behavioural, clinical and offence characteristics of perpetrators with personality disorder and their contact with services (continued)

	No contact			Contact within 12 months			Lost contact		
	Number (63)	%	(95 % CI)	Number (42)	%	(95 % CI)	Number (41)	%	(95 % CI)
Offence variables									
Age of victim: median (range)	36 (0-90)	-	-	38 (0-86)	-	-	39 (0-87)	-	-
Male victim	42	67	(54-78)	31	74	(58-86)	23	56	(40-72)
Victim was a current or former spouse/partner	11	17	(9-29)	9	21	(10-37)	8	20	(9-35)
Victim was a family member	12	19	(10-31)	4	10	(3-23)	8	20	(9-35)
Victim was a stranger	10	19	(9-31)	3	9	(2-24)	5	14	(5-30)
Sharp instrument used	22	35	(23-48)	19	45	(30-61)	14	34	(20-51)
Final outcome									
Murder	32	51	(38-64)	20	48	(32-64)	28	68	(52-82)
Manslaughter section 2 (diminished responsibility)	4	6	(2-15)	7	17	(7-31)	3	7	(2-20)
Manslaughter (other including provocation, self-defence)	26	41	(29-54)	15	36	(22-52)	10	24	(12-40)
Disposal									
Prison	59	94	(85-98)	37	88	(74-96)	38	93	(80-98)
Hospital order (with or without restriction)	1	2	(0-9)	4	10	(3-23)	1	2	(0-13)

4.6. How common is alcohol or drug misuse in homicide?

Alcohol misuse

Of the perpetrators with psychiatric reports, (1,323) 584 (50%) had a history of alcohol misuse including 119 who (20%) had a diagnosis of alcohol dependence. The number of males and females with a lifetime history of alcohol misuse were similar (504 cases, 50% v. 80 cases, 51%). Women were more likely to be alcohol dependent (21 cases, 16% v. 244 cases, 10%). Perpetrators with a history of alcohol misuse were more likely than perpetrators with no history of alcohol misuse to be unemployed (299 cases, 57% v. 195 cases, 38%), unmarried (331 cases, 62% v. 300 cases, 54%) and to live alone (98 cases, 21% v. 80 cases, 16%). They were less likely to be from an ethnic minority group (51 cases, 9% v. 163 cases, 28%). Forty-eight percent (279 cases) had previous convictions for violence. Sixty-five percent (379 cases) of the victims were male and victims were more likely to be killed by hitting or kicking (91 cases, 16% v. 59 cases, 10%). A diagnosis of personality disorder was more likely among perpetrators with a history of alcohol misuse (81 cases, 14% v. 34 cases, 6%); mental illness at the time of the offence was less likely (104 cases, 19% v. 141 cases, 26%). Eighty-seven percent (506 cases) of perpetrators who misused alcohol were imprisoned.

Contact with mental health services

One hundred and twenty-three (21%) had contact with mental health services within 12 months of the offence. Of these, 31 (25%) were subject to enhanced CPA and 42% (48 cases) missed their last appointment with services. Twenty-seven percent (29 cases) were non-compliant with medication in the month prior to the offence.

Drug misuse

Six hundred and three perpetrators with psychiatric reports (50%) had a history of drug misuse and 58 (10%) of these had a primary diagnosis of drug dependence. Males were more likely than females to have a lifetime history of drug misuse (542 cases, 52% v. 61 cases, 39%), but females were proportionally more often diagnosed with drug dependence (12 cases, 5% v. 70 cases, 3%). Perpetrators with a history of drug misuse were more likely than perpetrators with no history of drug misuse to be unemployed (323 cases, 61% v. 192 cases, 36%), unmarried (356 cases, 66% v. 293 cases, 51%) and homeless (23 cases, 5% v. 6 cases, 1%).

Almost half (283 cases, 47%) had previous convictions for violence. They were less likely to be from an ethnic minority group (97 cases, 16% v. 123 cases, 21%). Victims were more likely to be male (425 cases, 70% v. 320 cases, 53%), acquaintances (202 cases, 34% v. 139 cases, 23%) or strangers (97 cases, 20% v. 45 cases, 8%) and were more likely to have been killed by hitting or kicking (103 cases, 17% v. 50 cases, 8%). A diagnosis of personality disorder was more likely (88 cases, 15% v. 33 cases, 5%) and a diagnosis of an affective disorder less likely (38 cases, 6% v. 89 cases, 15%). Over half (308 cases, 51%) of perpetrators with a history of drug misuse were convicted of murder. The majority were imprisoned (518 cases, 86%).

Contact with mental health services

Two hundred and nineteen perpetrators (36%) with a history of drug misuse had a lifetime history of contact with mental health services. One hundred and twenty-two (20%) had contact within 12 months of the offence. Of those in contact in the last 12 months, 34% (41 cases) were subject to enhanced CPA and 47% (51 cases) missed their last appointment with services. Thirty-three perpetrators (32%) were non-compliant with their medication in the month prior to the offence.

Heroin misuse

One hundred and three (9%) perpetrators were using heroin regularly in the year before the offence. Characteristics of heroin users were not dissimilar to drug users as a whole. Proportionally fewer were from an ethnic minority group (5 cases, 5%).

Cocaine/crack cocaine misuse

Eighty (7%) perpetrators were using cocaine/crack cocaine regularly in the year before the offence. Characteristics of cocaine/crack cocaine users were not dissimilar to drug misusers as a whole. However, rates of personality disorder were higher (14 cases, 18%).

Trends

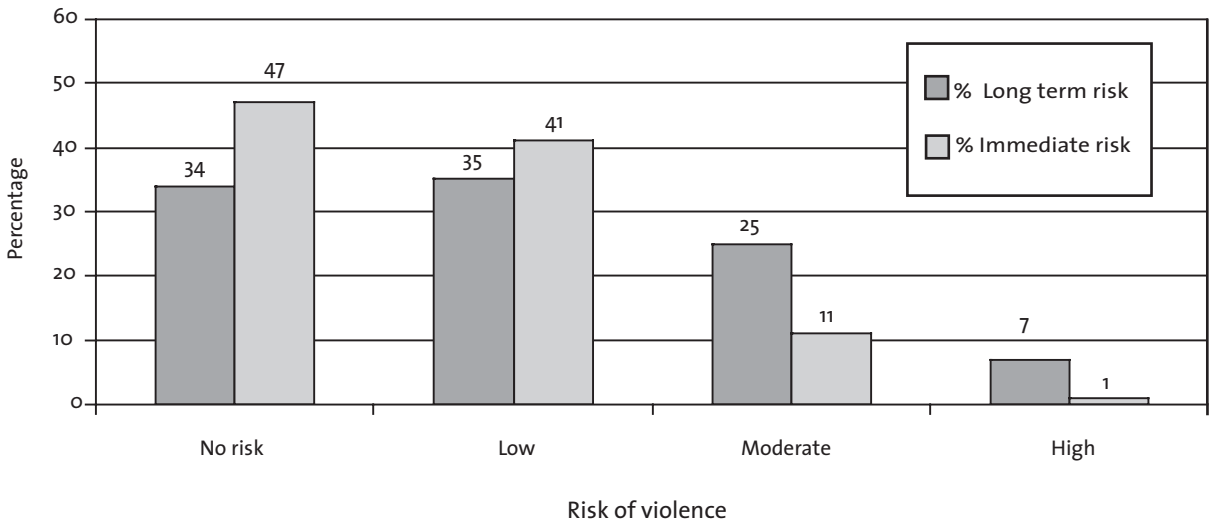
For perpetrators of homicide in the period 1997 to 2003, there has been a significant upward trend in alcohol and drug misuse. There has been no significant rise in heroin misuse but a significant rise in cocaine/crack cocaine misuse. However, the increase in the proportion of those reported to be misusing alcohol and drugs could be a reflection of fewer psychiatric reports being completed (see method section page 25).

4.7. Is risk recognised before homicide occurs?

Risk assessment at final contact

Seventy-one (29%) patients were seen within 7 days of committing the offence, 71 (29%) between 1-4 weeks, 47 (19%) between 5-13 weeks, 22 (9%) between 14 weeks-6 months and 34 (14%) between 7-12 months (Figure 38; page 123). Of all cases seen by services 12 months prior to the offence (249), assessment at final contact revealed abnormalities of mental state or a change in recent behaviour in 137 cases (57%). The most common abnormalities of mental state were emotional distress, depressive illness, hostility and increased use of alcohol or drugs. Nineteen (8%) showed evidence of delusions or hallucinations at last contact. Staff judgement of risk at final contact is shown in Figure 39. In 25 cases, immediate risk was judged to be moderate or high. In 62 cases, long term risk was judged to be moderate or high.

Figure 39: Mental health teams' estimation of risk of violence at last contact: Inquiry homicide cases

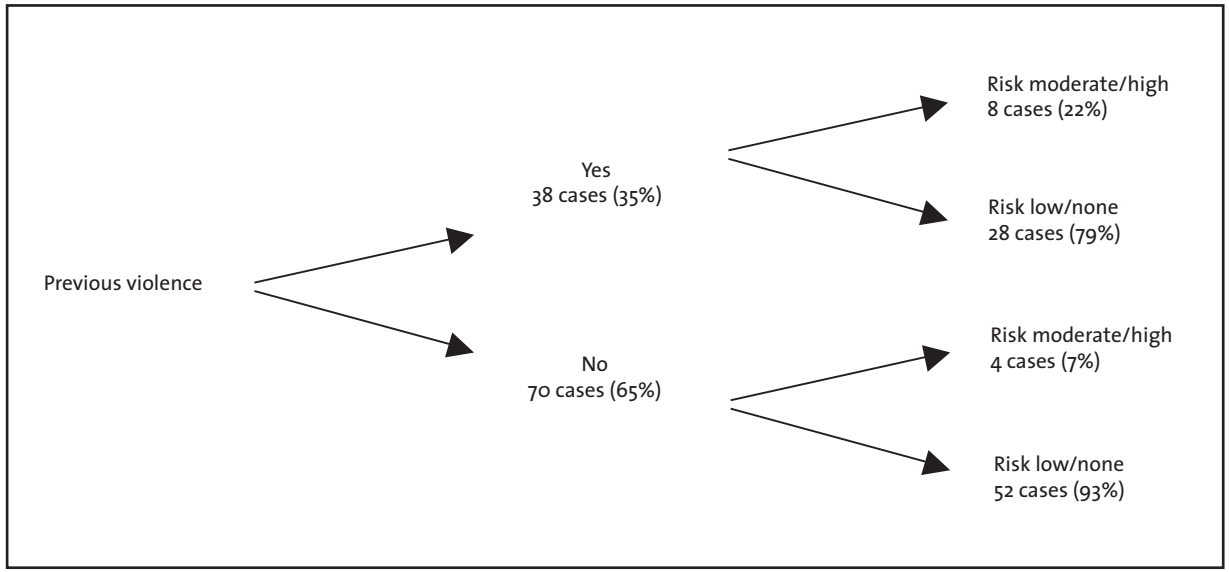


Of the patients with schizophrenia, 37 had abnormalities of mental state at final contact, mainly emotional distress (20 cases) and hostility (8 cases), but in 27 of these cases there was thought to be no or low immediate risk of violence. However, people with delusions or hallucinations or hostility at final contact were more likely to have been assessed as moderate or high risk.

Severe mental illness

Of those presenting with severe mental illness, people with a history of violence were more likely to be viewed as a high risk at assessment (Figure 40). However, in those who had been previously detained or had previously been admitted to a secure unit, the risk assessment conclusions were similar whether or not they had a previous history of violence. For perpetrators with schizophrenia or personality disorder, a history of violence, previous detention or previous admission to a secure unit made no difference to the estimation of risk.

Figure 40: Risk assessment in those with severe mental illness in contact within 12 months of the offence and a history of violence



Note. Risk is unknown in 2 cases of those with severe mental illness and previous violence and in 14 cases of those without previous violence.

4.8. Is CPA used to manage risk?

Use of enhanced CPA in high risk patients

Schizophrenia

Of those with schizophrenia in contact with services in the last year (74 cases), 28 (38%) had previously been admitted to a high security hospital, regional or medium secure units, or psychiatric intensive care. Fifty-five (74%) had previously been detained under mental health legislation. Thirty (42%) had previous convictions for violence including 11 with convictions for serious violence (i.e. previous homicide, attempted murder, threats to kill, malicious wounding or wounding). Forty-eight (66%) were under the highest levels of enhanced CPA. This included 24 (50%) who had previously been admitted to a secure unit, 39 (81%) previously detained under mental health legislation and 8 who had a history of serious violence.

Personality disorder

Of those with personality disorder in contact with services within the 12 months prior to the offence (42 cases), 5 (12%) had previously been admitted to a high security hospital, regional or medium secure units, or psychiatric intensive care and 5 (12%) had previously been detained under mental health legislation. Eighteen (45%) had previous convictions for violence including 6 for serious violence. Only 10 (25%) were under the highest levels of enhanced CPA.

Previous detention under the Mental Health Act

Seventy-eight (32%) patients in contact with services in the 12 months prior to the offence were previously detained under mental health legislation (including those under restriction) or had previously been admitted to a secure unit. Of the 78, 27 (35%) were not subject to enhanced CPA.

Previous violence

Thirty-eight patients who were in contact in the 12 months prior to the offence had a severe mental illness and a history of violence, 18 (47%) of these were not under enhanced CPA. Twenty-eight patients had severe mental illness, a history of violence and had either previously been detained under the Mental Health Act or been admitted to a secure unit. Of these, 8 (32%) were not subject to enhanced CPA.

Serious violence

Thirty-one (12%) individuals had a previous conviction for serious violence. The diagnosis of these patients were: 12 schizophrenia, 3 affective disorder, 6 personality disorder, 4 alcohol dependence, 3 substance dependence and 1 adjustment disorder. In the remaining 2 cases the diagnosis was unknown. Twelve (39%) had previously been detained under mental health legislation, including 7 detained under forensic (Part 3) mental health legislation. Six (33%) had a history of previous violence whilst psychotic. Only 10 (32%) were subject to enhanced CPA.

Previous violence whilst psychotic

Thirty-six patients committed a previous violent incident whilst psychotic. Thirty-two (89%) had previously been detained under the Mental Health Act, 18 (50%) had previously been detained in a secure unit. Twenty-seven (75%) were under enhanced CPA.

Service provision under CPA

Sixty-seven (27%) of those in contact with services in the 12 months prior to the offence were under enhanced CPA. Of these, 23 (39%) were non-compliant with their medication in the month before the homicide, 23 (40%) missed their last appointment and 32 (48%) were either non-compliant with their medication or missed their last appointment.

Schizophrenia

Forty-three patients with schizophrenia had either previously been admitted to a secure unit, previously detained under the Mental Health Act or had a history of violence and had been under enhanced CPA. Of these, 19 (46%) were non-compliant with their medication in the month before the offence, 18 (49%) missed their last appointment with services and twenty-three (53%) were either non-compliant with their medication or missed their last appointment.

Personality disorder

Eight people with personality disorder had been under enhanced CPA. Of these, 1 case was non-compliant in the month before the offence, 3 missed their last appointment and 4 were either non-compliant with their medication in the month before the offence or missed their last appointment with services.

Perpetrators who were previously detained under the Mental Health Act

Fifty people were previously detained under the Mental Health Act or admitted to secure care and were under enhanced CPA. Of these, 19 were non-compliant with their medication in the month in the month before the offence, 19 missed their last appointment with services and 25 were either non-compliant with their medication in the month before the offence or missed their last appointment with services.

Previous violence

Twenty-six people with a history of previous violence were under enhanced CPA. Of these, 10 (45%) were non-compliant with their medication in the month before the offence, 9 (39%) missed their last appointment with services and 14 (54%) were either non-compliant with their medication in the month before the offence or missed their last appointment with services.

Serious violence

Ten people with a history of previous serious violence were under enhanced CPA. Of these, 7 (70%) were non-compliant with their medication in the month before the offence, 4 (44%) missed their last appointment with services and 7 (70%) were either non-compliant with their medication in the month before the offence or missed their last appointment with services.

Previous violence whilst psychotic

Twenty-seven people previously violent whilst psychotic were under enhanced CPA. Of these, 10 (42%) were non-compliant with their medication in the month before the offence, 9 (43%) missed their last appointment with services and 13 (50%) were either non-compliant with their medication in the month before the offence or missed their last appointment with services.

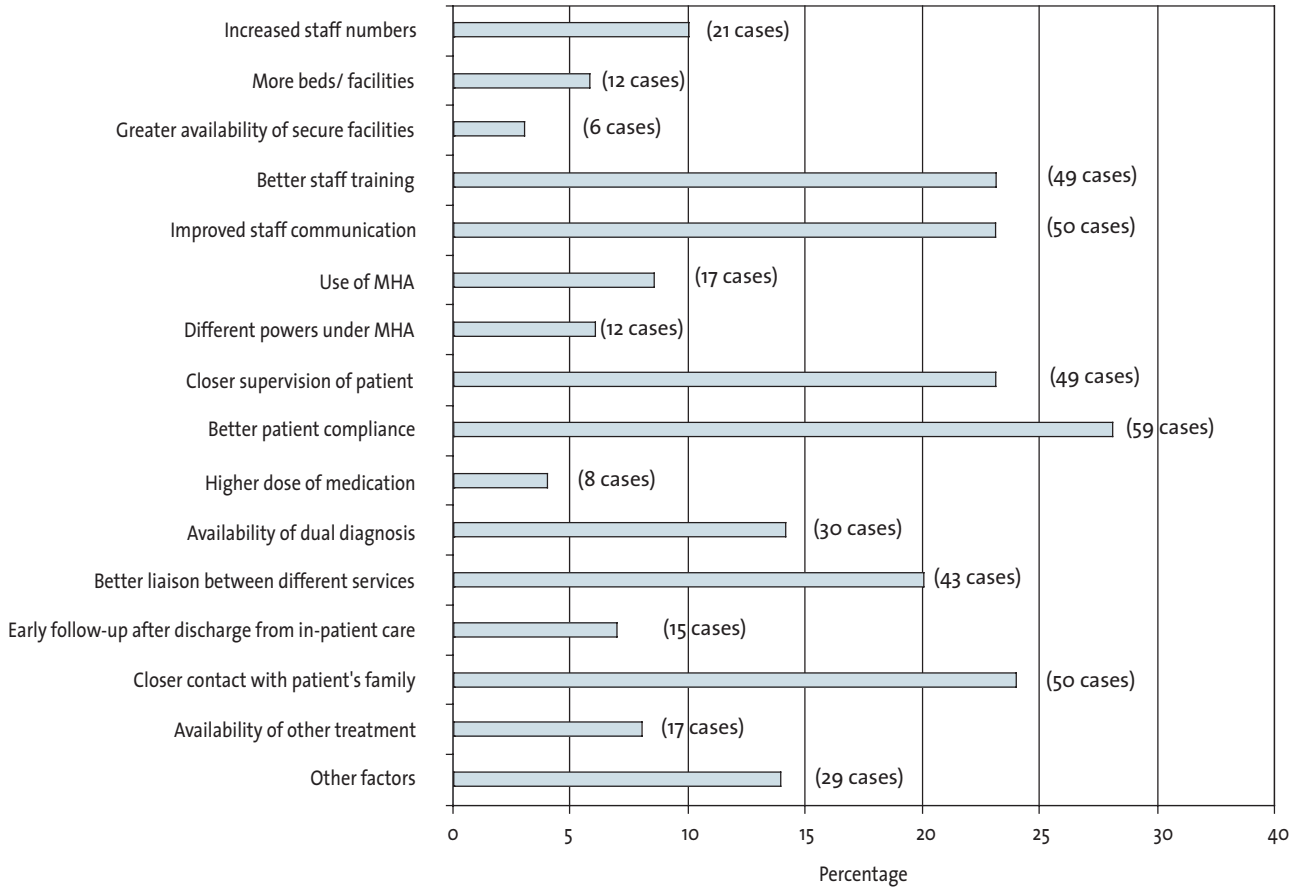
4.9. How many patient homicides were preventable?

Clinicians' views

Clinicians identified 41 (21%) cases in contact with services within 12 months of the homicide where the homicide could have been prevented. These included 23 (56%) patients with schizophrenia, 6 (15%) with more than 5 previous admissions and 25 (61%) who had been previously detained under the Mental Health Act.

Clinicians were able to identify factors that would have made the homicide less likely. The factors most frequently mentioned were better patient compliance, closer contact with the patient's family, closer patient supervision, improved staff communication and better staff training (Figure 41). In 12 cases the respondent believed that different powers under the Mental Health Act would have made the homicide less likely.

Figure 41: Factors which could have made homicide less likely in recent contact Inquiry cases



Preventable homicides

The "most preventable" homicides can be defined as for suicides (see page 92). These are

(1) Among in-patients:

- patients who committed homicide while under close observation (2 cases)
- patients detained under the Mental Health Act who committed homicide within 7 days of admission (2 cases)
- high risk (severe mental illness & previous violence) informal patients who committed homicide within 7 days of admission (0 cases)
- high risk patients who were living alone and committed homicide later in their admission after being given home leave (1 case)
- patients who committed homicide within 7 days of admission who had absconded from the ward (1 case)

In total, because these groups overlap, we estimate that 4 cases, or 27% of in-patient homicides may have been preventable.

(2) Among the post-discharge patients:

- patients who committed homicide before their first follow-up (6 cases).

(3) Among community patients (excluding the post-discharge cases):

- patients who were detained under the Mental Health Act in their last admission who were not subject to enhanced CPA (10 cases)
- patients with both severe mental illness and a history of previous violence who were not subject to enhanced CPA (12 cases)

In total, allowing for overlap, 18 cases may have been preventable.

- CPA patients who were non-compliant with medication in the month before homicide, with no direct attempt to encourage compliance (4 cases)
- CPA patients who missed their last appointment, with no assertive response by services (3 cases)

In total, allowing for overlap, 6 cases may have been preventable.

In total, we estimate that 24 cases, 13% of community homicides may have been preventable.

Putting all three groups together (in-patients, post-discharge cases and community cases) gives 34 cases, 7 per year, 14% of all patient homicides that were in the "most preventable" group.

Community treatment orders

We have no reliable way of calculating how many homicides would be prevented by a community treatment order. Our figures do, however, indicate the potential for prevention. Our sample contains 40 previously detained patients who committed a homicide following non-compliance with medication or loss of contact with services, 16% of cases or 8 per year. Overall, 25% of patient homicides were preceded by non-compliance, 11 cases per year.

4.10. How common is homicide followed by suicide?

Timing of suicide

We were notified of 109 unconvicted homicide suspects who subsequently died by suicide. Eighty (73%) suspects died by suicide less than 3 days after the homicide; 29 (27%) three or more days later. Nine suspects (8%) died by suicide following conviction; these are not included in the analysis. Figure 42 shows the timing of the suicide after homicide.

Suspects

The social and demographic characteristics of the suspects and victims are shown in Table 24. Suspects were predominantly male (97 cases, 89%) with a median age of 42.

Victims

Eighty-five (79%) victims were female, with a median age of 39. Females were more likely to kill a male (8 cases, 67% v. 4 cases, 33%) and males were more likely to kill a female (81 cases, 85% v. 14 cases, 15%). Females were more likely than males to kill their son or daughter (10 cases, 83% v. 7 cases, 7%). Eighty-three percent (10 cases) of females killed a child under 16 years, compared to 11% (10 cases) of males.

Figure 42: Number of days between homicide and suicide

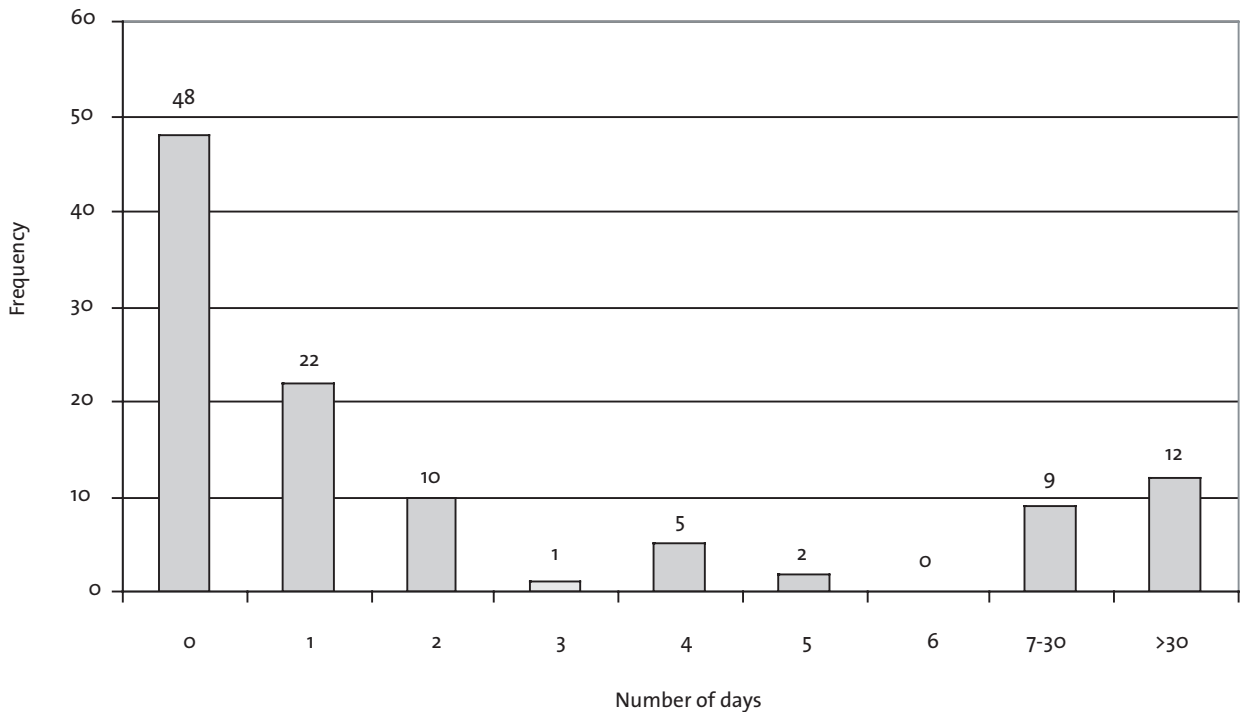


Table 24: Characteristics of suspects of homicide followed by suicide

	Number (109)	%	(95 % CI)
Demographic features			
Age of suspect: median (range)	42 (20-88)	-	-
Male suspect	97	89	(83-95)
Number of victims			
1	92	86	(79-93)
2	8	7	(2-12)
3	4	4	(0-7)
4	2	2	(0-4)
Male victim	22	16	(13-28)
Age of victim: median (range)	37 (0-89)	-	-
Relationship to suspect			
Son/daughter	17	16	(9-22)
Current or former spouse/partner	70	64	(55-73)
Other family member	8	7	(2-12)
Acquaintance	7	6	(2-11)
Method			
Sharp instrument	28	27	(18-35)
Blunt instrument	6	6	(1-10)
Strangulation	22	21	(13-29)
Exhaust fumes	4	4	(0-7)
Poisoning	3	3	(0-6)
Shooting	16	15	(8-22)
Suffocation	5	5	(1-9)
Other	17	16	(9-23)

Seventy-one percent (69 cases) of men and 8% (1 case) of women killed a current or former spouse/partner. Women were more likely than males to have multiple victims (i.e. 2 or more) (4 cases, 33% v. 11 cases, 12%).

Method of homicide

The method of homicide also differed between the sexes. Women mainly used poisoning (including car exhaust) (3 cases, 25%), while men tended to use more violent methods such as stabbing (sharp instruments) (27 cases, 29%), strangulation (21 cases, 23%) and shooting (16 cases, 17%).

Immediate compared to delayed suicide

A comparison between those committing suicide immediately (within 3 days) and after 3 days is shown in Table 25. The immediate group more commonly killed a current or former spouse/partner (54 cases, 68%) or their son or daughter (13 cases, 16%) and more often had multiple victims (12 cases, 15% v. 2 cases, 10%).

Perpetrators with a history of contact in the 12 months before the offence

Of the 109 cases of homicide followed by suicide, 9 (8%) had previous contact with psychiatric services.

We received questionnaires on 7 (78%) of these Inquiry cases. Six (86%) of these seven cases had contact with services in the 12 months before the offence and these will be described below.

Social and clinical features

Five (83%) were male and 1 (17%) was female. The diagnoses were personality disorder (2 cases, 40%), affective disorder (2 cases, 40%), schizophrenia (1 case, 20%) and in 1 case the diagnosis was unknown. Three had a secondary diagnosis, in 2 (67%) cases this was an adjustment disorder and in 1 (33%) case alcohol dependence. Four (67%) had a history of self-harm and 1 a history of alcohol misuse. Two (40%) patients had any history of violence but only 1 (20%) had been convicted of a violent offence.

Care arrangements

All 6 were community patients at the time of the homicide/suicide. Half (3 cases, 50%) had previously been admitted to a psychiatric ward. One (17%) was under enhanced CPA, 4 (67%) were out of contact at the time of the homicide/suicide and 3 (50%) were non-compliant with their medication in the month prior to the homicide/suicide.

Last contact

In 1 case (17%) the last service contact had taken place within 7 days of the homicide/suicide. In a further 2 (33%) cases the last contact occurred within one month of the homicide/suicide. Five (83%) of the cases were considered to be at no or low risk of violence in the short-term and 4 (67%) in the long-term. All 6 were considered to be at no or low risk of suicide in the short-term and 5 (83%) in the long-term.

Offence

Three (50%) died by suicide on the same day as committing homicide; 1 (17%) died 2 days later 1 (17%) died 18 days later and 1 (17%) died 22 days later. All of the suspects killed someone they knew and each killed only one victim. Four (67%) of the male suspects killed a woman, 2 (50%) of whom were their current or former spouse/partner. The only female suspect in recent contact with services, killed her child.

Method of homicide and suicide

Four (67%) suspects used the same method to kill their victim as they used to kill themselves. In 2 cases the method used was hanging/strangulation, in 1 (17%) case shooting and in 1 (17%) case by a sharp instrument.

Table 25: Social and criminological characteristics of immediate and delayed suicide after homicide

	Immediate (within 3 days)			Delayed (more than 3 days)		
	Number (80)	%	(95% CI)	Number (29)	%	(95 % CI)
Demographic features						
Age of suspect: median (range)	44 (20-88)	-	-	39 (23-76)	-	-
Male suspect	71	89	(80-95)	26	90	(73-98)
Number of victims						
1	66	85	(75-92)	26	90	(73-98)
2	7	9	(4-18)	1	3	(0-18)
3	3	4	(1-11)	1	3	(0-18)
4	2	3	(0-9)	0	0	
Male victim	15	19	(11-30)	7	24	(10-44)
Age of victim: median (range)	37 (0-89)	-	-	38 (0-79)	-	-
Relationship to suspect						
Son/daughter	13	16	(9-26)	4	14	(4-32)
Current or former spouse/partner	54	68	(56-78)	16	55	(36-74)
Other family member	4	5	(1-12)	4	14	(4-32)
Acquaintance	5	6	(2-14)	2	7	(1-23)
Method						
Sharp instrument	18	24	(15-35)	10	34	(18-54)
Blunt instrument	5	7	(2-15)	1	3	(0-18)
Strangulation	17	22	(14-33)	5	17	(6-36)
Exhaust fumes	3	4	(0-11)	1	3	(0-18)
Poisoning	2	3	(0-9)	1	3	(0-18)
Shooting	13	17	(9-27)	3	10	(2-27)
Suffocation	4	5	(1-13)	1	3	(0-18)
Other	11	14	(7-24)	6	21	(8-40)

chapter five

SUDDEN UNEXPLAINED DEATH (SUD) IN MENTAL HEALTH IN-PATIENT UNITS

5.1. How common is sudden unexplained death?

Questionnaires

Between March 1999 and December 2004, 4,018 questionnaires were sent out relating to cases in which an in-patient death (of any cause) had occurred. Two hundred and forty-five (6%) cases were ineligible because the patient, consultant, or case notes could not be identified or located. Of the remainder, 3,440 were returned, 91% of those eligible and 86% of the total. From the returned questionnaires, a total of 235 (7%) were identified as cases of SUD. This is the number of cases that occurred in England and Wales over a period of almost 6 years, giving an average annual figure of 41 cases.

Rates

In England, rates of SUD per 10,000 NHS mental health and learning disability admissions are presented for calendar years 1999-2004 by sex (Table 26) and by age group (Table 27). The overall rate was 2.19 (95% CI 1.90 to 2.50). The rate increased with age and was higher in males.

5.2. Who are the patients?

The characteristics of SUD cases are shown in Table 28. The majority of patients were male, white, unmarried, and living alone prior to admission. Eighty percent of patients were admitted either to a general adult psychiatry or old age specialty, with the remaining 20% in rehabilitation, forensic psychiatry, alcohol or other units. The most common primary diagnoses were schizophrenia and affective disorder, accounting for 62% of all cases. Thirty-seven percent of all patients had more than five previous admissions. Duration of admission prior to the date of death varied although 18% had been admitted for less than 1 week and 21% for more than 1 year.

The age and sex profile is shown in Figure 43. The difference in risk between men and women occurs because of the number of deaths in young men. Seventeen patients were from an ethnic minority, 7% of all cases. Of these, 8 cases (47%) were under 45 years of age.

Table 26: Rates of sudden unexplained death per 10,000 NHS mental health and learning disability admissions by sex

Calendar Year	Males			Females			All		
	Number	Rate	(95 % CI)	Number	Rate	(95 % CI)	Number	Rate	(95 % CI)
1999*	18	2.34	(1.39-3.71)	15	2.12	(1.19-3.50)	33	2.20	(1.52-3.10)
2000	29	3.34	(2.24-4.79)	10	1.23	(0.59-2.26)	39	2.24	(1.60-3.07)
2001	15	1.72	(0.97-2.85)	9	1.11	(0.51-2.10)	24	1.40	(0.90-2.09)
2002	21	2.47	(1.53-3.77)	14	1.79	(0.98-3.01)	35	2.14	(1.49-2.97)
2003	20	2.50	(1.52-3.85)	22	3.03	(1.90-4.59)	42	2.75	(1.98-3.72)
2004	22	2.80	(1.76-4.24)	15	2.14	(1.20-3.53)	37	2.49	(1.75-3.43)
TOTAL	125	2.53	(2.10-3.01)	85	1.87	(1.50-2.32)	210	2.19	(1.90-2.50)

*01/03/1999 - 31/12/1999

Table 27: Rates of sudden unexplained death per 10,000 NHS mental health and learning disability admissions by age

Calendar Year	15-44 years			45-64 years			65-74 years		
	Number	Rate	(95 % CI)	Number	Rate	(95 % CI)	Number	Rate	(95 % CI)
1999*	9	0.93	(0.42-1.76)	11	3.09	(1.54-5.53)	13	7.61	(4.05-13.01)
2000	16	1.43	(0.82-2.32)	15	3.56	(1.99-5.88)	8	4.05	(1.75-7.99)
2001	4	0.36	(0.10-0.93)	11	2.65	(1.32-4.74)	9	4.73	(2.16-8.98)
2002	8	0.76	(0.33-1.49)	15	3.73	(2.09-6.15)	12	6.70	(3.46-11.70)
2003	10	1.01	(0.49-1.86)	15	3.95	(2.21-6.51)	17	10.51	(6.12-16.83)
2004	10	1.06	(0.51-1.94)	10	2.62	(1.26-4.82)	17	10.74	(6.26-17.20)
TOTAL	57	0.92	(0.70-1.19)	77	3.27	(2.58-4.09)	76	7.18	(5.66-8.99)

*01/03/1999 - 31/12/1999

Table 28: Social and clinical characteristics of sudden unexplained death cases

	Number (235)	%	(95% CI)
Demographic features			
Age: median (range)	61 (19-75)	-	-
Male	139	59	(53-65)
Ethnicity:			
Black Caribbean/Black African	9	4	(2-7)
Indian /Pakistani /Bangladeshi	8	3	(2-7)
White	208	90	(85-94)
Not currently married	156	68	(61-74)
Living alone	78	35	(28-41)
Clinical features			
Specialty patient admitted to:			
General adult psychiatry	97	41	(35-48)
Old age psychiatry	92	39	(33-46)
Forensic psychiatry	11	5	(2-8)
Alcohol unit	3	1	(0-4)
Rehabilitation unit	18	8	(5-12)
Other specialty	13	6	(3-9)
Primary diagnosis:			
Schizophrenia and other delusional disorders	79	34	(28-40)
Affective disorder (bipolar disorder and depression)	66	28	(23-34)
Dementia	46	20	(15-25)
Learning Disability	10	4	(2-8)

(continued overleaf)

Table 28: Social and clinical characteristics of sudden unexplained death cases (continued)

	Number (235)	%	(95% CI)
Clinical features (continued)			
Duration of admission prior to date of death:			
Up to 7 days	42	18	(13-24)
Between 1 week and 3 months	87	37	(31-44)
Between 3 months and 1 year	54	23	(18-29)
More than 1 year	50	21	(16-27)
More than 5 previous admissions	84	37	(30-43)
Behavioural features			
History of non-compliance with medication	107	47	(41-54)
History of substance misuse	73	31	(26-38)
Physical health features			
Did the patient smoke:			
Never	72	36	(29-43)
Ex-smoker	31	16	(11-21)
Current smoker	97	49	(41-56)
Family history of sudden premature death	11	6	(3-11)
Physical examination during final admission	216	93	(89-96)
By doctor on patient's own team	165	72	(66-78)

(continued overleaf)

Table 28: Social and clinical characteristics of sudden unexplained death cases (continued)

	Number (235)	%	(95% CI)
Physical health features (continued)			
History of cardiovascular disease	106	46	(40-53)
History of respiratory disease	71	31	(25-37)
History of cerebrovascular disease, neurological disease or epilepsy	87	37	(31-44)
ECG performed within the year of death	85	41	(34-48)
Circumstances of death			
Died on the ward	198	85	(80-89)
Detained under MHA	65	28	(23-35)
Observation level: high or medium	48	21	(16-27)
Behaviour			
Arousal (e.g. agitation)	52	23	(18-29)
Behavioural disturbance	29	13	(9-18)

(continued overleaf)

Table 28: Social and clinical characteristics of sudden unexplained death cases (continued)

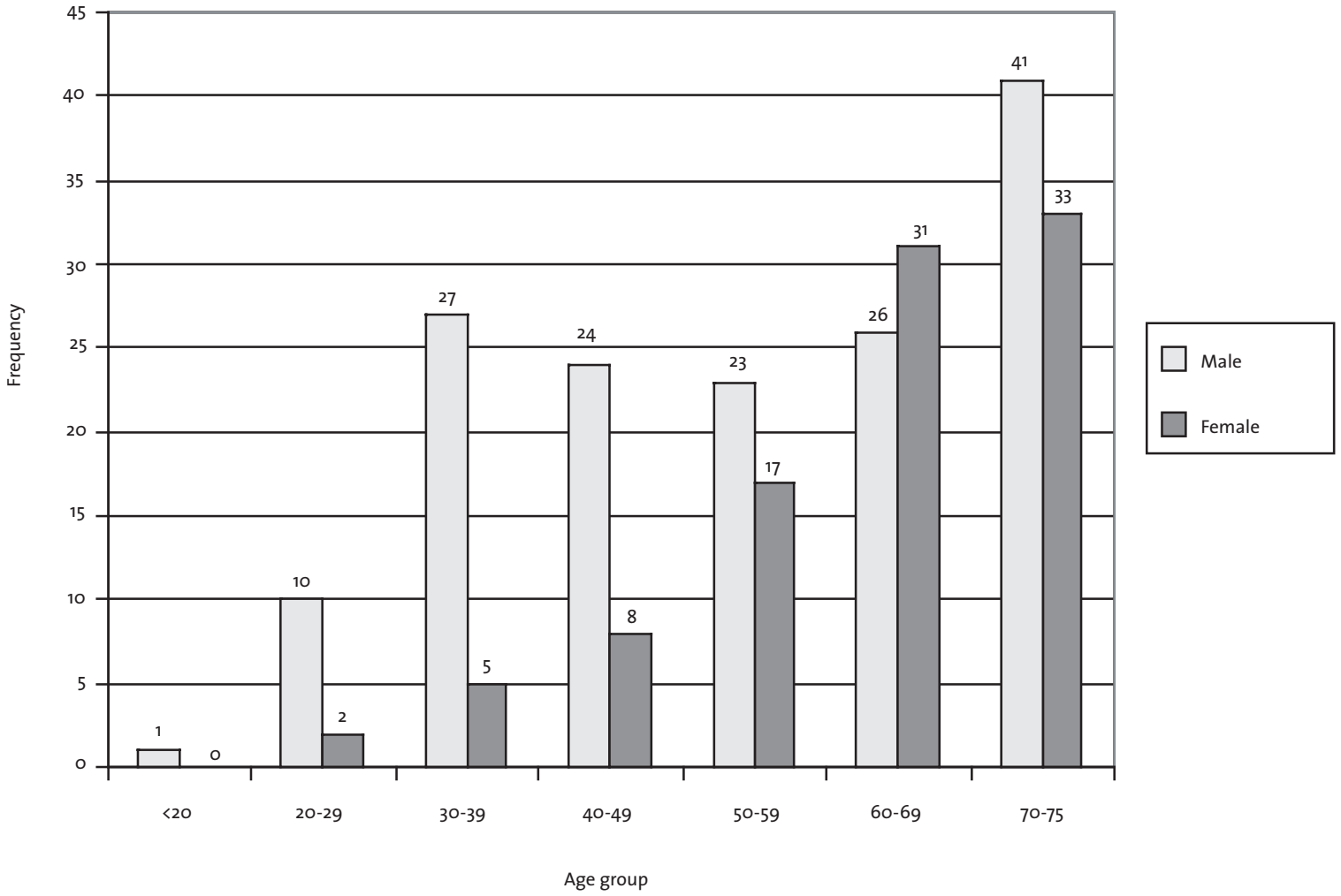
	Number (235)	%	(95% CI)
Restraint/seclusion			
Physical restraint within 24 hours	6	3	(1-6)
Physical restraint within 24 hours (by year)			
1999	0		
2000	4		
2001	0		
2002	1		
2003	0		
2004	1		
Physical restraint within 1 hour	4	2	(0.5-4)
Physical restraint within 1 hour (by year)			
1999	0		
2000	2		
2001	0		
2002	1		
2003	0		
2004	1		
Seclusion/"time out" within 24 hours	5	2	(1-5)

(continued overleaf)

Table 28: Social and clinical characteristics of sudden unexplained death cases (continued)

	Number (235)	%	(95% CI)
Resuscitation			
CPR attempted	126	57	(50-64)
Member of staff trained in CPR	116	87	(80-92)
CPR equipment available on the ward	131	68	(61-75)
Emergency medical team available on site	94	45	(38-52)
Information sharing			
Case discussed:			
Within the team	196	92	(87-95)
With the patients relatives	185	90	(85-94)
Post mortem carried out	132	67	(60-74)
Internal/external inquiry carried out	41	19	(14-25)

Figure 43: Cases of sudden unexplained death by age and sex



5.3. What are the possible causes of sudden unexplained death?

Drugs

Medication administered within 24 hours of death is shown in Table 29. Of the 235 SUD cases, 78% were administered psychotropic drugs while 49% were given 2 or more psychotropic drugs. Twenty-five percent of patients administered antipsychotic drugs were given typical antipsychotics; 7% were given a combination of depot and oral antipsychotics. Ten percent of patients were administered tricyclic antidepressants.

Table 29: Medication taken within 24 hours of sudden unexplained death

	Number (235)	%	(95% CI)
Psychotropic drugs	182	78	(72-83)
Antipsychotics:	124	53	(47-60)
Atypical antipsychotics	85	36	(30-43)
Typical antipsychotics	58	25	(19-31)
QTc prolonging antipsychotics*	17	7	(4-11)
Depot and oral antipsychotics	17	7	(4-11)
Antidepressants:**	66	28	(23-35)
SSRIs	28	12	(8-17)
Tricyclic antidepressants	23	10	(6-14)
QTc prolonging antipsychotics and tricyclics	1	0.5	(0-2)
Polypharmacy†	113	49	(42-55)

* Droperidol, Pimozide, Thioridazine, IM Droperidol.

** Includes other antidepressants and SNRIs.

† Defined as two or more psychotropic drugs.

Restraint and seclusion

Eighty-five percent of patients died on the ward. Six patients (7%) were restrained within 24 hours of death; 5 (83%) white patients and one (17%) black patient. Of these six, 4 (67%) patients were restrained within 1 hour of death, 3 (75%) of whom were white and one (25%) black. The number of deaths following restraint in each year is shown in Table 28. Four (67%) of the six patients who were restrained were also placed in seclusion in the 24 hours before death. Arousal and behavioural disturbance was recorded in 24 (10%) of patients.

It is possible that some deaths following restraint did not meet our strict criteria for SUD and therefore will not be included in these figures. We are now identifying these additional cases and will include them in a future publication.

Physical health

Forty-six percent of all patients had a history of cardiovascular disease, while 31% had a history of respiratory disease. Thirty-seven percent of patients had a history of either cerebrovascular disease, neurological disease or epilepsy. A physical examination had been carried out during the final admission in 93% of cases, 72% conducted by a doctor on the patients own medical team. An electrocardiogram (ECG) had been performed within a year of death in 41% of all patients.

Of the 135 patients with a history of cardiovascular or respiratory disease, 8 (6%) were administered a QTC prolonging antipsychotic.

Resuscitation

Cardiopulmonary resuscitation (CPR) was attempted in 57% of all cases. In 87% of these cases a member of staff was trained in CPR while CPR equipment was available on site in 68% of cases. An emergency medical team was on site in 45% of cases. When a medical team was summoned, the team arrived in less than 5 minutes in 36% of cases (43 cases) , between 5 and 15 minutes in 44% of cases (53 cases) and more than 15 minutes in 20% of cases (24 cases).

Protocols

Detailed investigation of a sub-sample of cases (14 patients under 45 years) revealed a lack of clinical protocols in these areas:

- Drugs used in rapid tranquillisation
- Observation of tranquilised patients
- Prescribing high doses of psychotropic drugs.

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appendices

APPENDIX 1: ADDITIONAL INQUIRY STUDIES

1) Case-control studies of suicide by current in-patients and suicides within 3 months of discharge from in-patient psychiatric care

Two groups of patients at high risk of suicide are psychiatric in-patients and those recently discharged from psychiatric in-patient care. Such suicides occur in close proximity to mental health care and might be most amenable to prevention by psychiatric services. Little research has specifically investigated factors associated with suicide by in-patients or post-discharge patients with a view to informing prevention strategies. Most studies have been observational and have involved comparatively small numbers of subjects. There are also doubts as to whether risk factors identified from suicide studies in the general population can be transferred to clinical groups.

Safety First (2001) showed that 16% of suicides are by current in-patients and 24% by patients recently discharged from in-patient care.

A key characteristic of in-patient death by suicide is death by hanging/strangulation, with poor ward design often being cited as a contributory factor. Suicide by post-discharge patients is most likely to occur in the 1-2 weeks following discharge and early post-discharge deaths are more likely to occur when a patient has discharged him/herself from hospital.

Such clinical surveys involve no comparison groups and as such are unable to investigate specific aetiological factors. We are therefore carrying out two national case-control studies on a sample of current in-patients and a sample of patients recently discharged from psychiatric in-patient care.

Aims

The aims of these studies are to:

- compare a) in-patient and b) post-discharge suicides, with surviving controls on a number of key demographic, social and clinical risk factors
- identify any differences in the clinical care of these suicides and controls
- develop models of suicide by in-patients and recently discharged patients in order to inform risk assessment tools for use in clinical practice.

Method

Both studies are retrospective case-control studies and use identical methods. The in-patient sample consists of a consecutive series of 250 suicides notified to the Inquiry from April 1999 to December 2000 whose death occurred whilst in in-patient care. Controls (250 subjects) have been randomly selected from the NHS-Wide Clearing Service (NWCS) dataset which collects anonymous patient data on all hospital admissions. Eligible controls are those who were alive and still in in-patient care on the index date, i.e. the date of death of the corresponding case.

The post-discharge sample consists of a consecutive series of 250 suicides notified to the Inquiry from April 2000 to December 2001 whose death occurred within three months of discharge from psychiatric in-patient care. Two hundred and fifty controls have been randomly selected from the NWCS dataset and matched for date of discharge from in-patient care. Eligible controls are those who were alive on the index date.

2) A psychological autopsy study of suicide by people under mental health care

Psychological autopsy studies seek to reconstruct the lifestyle and personality of the deceased by collecting detailed information from a number of different sources, including the relatives of the deceased.

There are a number of advantages and disadvantages in using this methodology. Some disadvantages are that the approach is retrospective and that the informant and researcher are subject to bias as they are aware that the subject died by suicide. It has also been suggested that interviews with relatives could be distressing and be a further source of trauma for grieving relatives. However, several psychological autopsy studies have reported that some participants found interviews to be a positive experience. The advantage of using the psychological autopsy approach is that the interviews provide rich information about the circumstances leading up to death, which supplements information gathered quantitatively from other sources.

This study extends the Inquiry's data collection on suicides in contact with mental health services to include both qualitative and quantitative information from coroners, relatives, general practitioners (GPs) and emergency departments, in order to investigate more fully the preventable antecedents of suicide.

Aims

The aim of the study is to extend information on patients who have died by suicide and who were in contact with mental health services in the 12 months prior to suicide. The main objectives of this study are to:

- investigate the details of contact with GPs and emergency departments in the 12 months prior to death
- investigate the social and clinical circumstances and life events prior to death
- develop the psychological autopsy methodology using techniques such as: a) carrying out quality ratings of multiple data sources and b) consensus ratings of variables
- examine the feasibility of data collection from these sources, with a view to collecting data in the future on general population suicides or those in primary care (i.e. who have not been in contact with secondary mental health services).

Method

The sample consists of 250 consecutive suicides occurring in the North West region of England from the 1st of January 2003 who have been identified as 'Inquiry cases'. GPs are contacted and invited to participate in a semi-structured interview covering clinical and social factors leading up to the death. They are also asked for their views on both the mental health care received by their patient and on prevention. Additionally, proformas have been designed to extract data from GPs medical records, emergency department records and coroner files. Interviews were conducted with the relatives of 10 cases extracted early in the study. However, these interviews have proved resource intensive with relatives being difficult to contact and many not wishing to participate. Coroner records have proved to be a good alternative source for this type of information.

3) Antecedents of homicide study

The psychological autopsy method has been used to investigate the psychosocial characteristics of suicide victims for over forty years. This methodology also has the potential to be a novel and useful way of studying homicide but no such study has yet been carried out.

Aims

This research is a pilot study, which aims to examine the feasibility of using psychological autopsy methods to study the antecedents of homicide. Specifically, the pilot study will examine the feasibility of:

- interviewing homicide perpetrators, including the consent rate for participation in the study
- interviewing the relatives of homicide perpetrators
- gathering information from general practitioners (GPs) for those who have and have not had contact with secondary mental health services.

If successful, a larger psychological autopsy study of homicide perpetrators will estimate the prevalence of mental illness in those convicted of homicide and investigate the relationship between mental illness and offending behaviour, combining data from multiple sources.

Method

This pilot study aims to collect data on 20-25 people convicted of homicide. The perpetrators convicted of homicide are approached first and are asked to participate in a semi-structured interview. This interview uses standardised interview schedules to diagnose mental illness and substance misuse/dependence (SCID 1), personality disorder (SCID 2), childhood trauma (CTQ), anger and impulsivity (BIS) and psychopathy (PCL-SV). An interview schedule has also been designed to explore details of the index offence, its relationship to mental health and/or substance misuse where appropriate, help seeking behaviour and views on prevention.

Perpetrators will be asked for their consent to interview a member of their family about family history, the perpetrator's social networks, concerns the family had during the period leading up to the offence and their views on prevention.

They will also be asked to provide consent for the research team to review their medical records in order to obtain information about the frequency and nature of contact with GPs and emergency departments. Additionally, with the perpetrator's consent, their GP will be invited to participate in an interview to discuss clinical and social factors, their assessment of the perpetrator's risk prior to the offence and their views on prevention.

4) Serious violence by people with mental illness

Epidemiological studies have established a small but significant association between severe mental illness, particularly schizophrenia, and violence. Clinical studies have explored this relationship in greater detail and have shown that positive psychotic symptoms (e.g. delusional beliefs), previous violent behaviour and co-morbid substance abuse may be the most important mediating factors. There have been no large-scale studies assessing offenders and their history of contact with mental health services and few studies have examined the actions of services prior to an act of violence by a patient. This project is designed as an extension of the homicide Inquiry to examine a national sample of people convicted for serious violence who have had contact with mental health services.

Aims

The aims of the study are to:

- establish the prevalence of mental health service contact in those carrying out serious violent offences
- examine the social and clinical characteristics of those with a history of contact with psychiatric services.

Method

The names of people convicted of serious violence (attempted murder, threats to kill, wounding and malicious wounding) irrespective of mental health history for the year 2004 are notified to the Inquiry by the Home Office Offender Index. This data source provides demographic information on the perpetrator, details about the offence, sentencing and outcome in court. Antecedent history of previous offending will be collected via the Police National Computer.

NHS trusts and mental health service providers in the perpetrator's area of residence are contacted to establish whether the offender was in contact with mental health services in the year before the offence. If perpetrators were in contact with services, a questionnaire is sent to the consultant psychiatrist responsible for the person's care. The questionnaire is then completed in conjunction with the multi-disciplinary team and consists of sections covering: demographic information; clinical history; details of clinical care; details of last contact with services and the respondent's views on prevention.

APPENDIX 2: INQUIRY PUBLICATIONS

Papers

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APPENDIX 3: 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.

Care Programme Approach (CPA)

Department of Health guidelines for the care of the most needy patients with mental illness – main elements are a key worker, a written care plan, and at the "higher level(s)", regular reviews by the multidisciplinary health team. Similar guidelines exist for Wales. In this report, CPA refers to both England and Wales.

Cognitive therapy

A form of psychological treatment used mostly in non-psychotic disorders such as depression but increasingly shown to be a useful component of treatment in schizophrenia.

Co-morbidity

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

Drugs:

Psychotropic drugs

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

Antipsychotic drugs

Drugs used to treat psychosis, particularly schizophrenia.

Atypical antipsychotic drugs

Newer (and therefore more expensive) antipsychotic drugs which do not have some of the side-effects of older drugs, especially abnormal movements.

Antidepressants

Drugs used to treat depression (and other disorders). Two main sub-groups: (1) Tricyclic antidepressants, used for many years, cheap but can be more dangerous in overdose. (2) Selective serotonin reuptake inhibitors (SSRIs), newer and more expensive but generally have fewer side-effects and are safer in overdose.

Homicides

Convictions for murder, manslaughter or infanticide in England and Wales:

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 his/her responsibility was substantially impaired ("diminished responsibility").

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

Inquiry case
A person on whom the Inquiry obtained questionnaire data. The Inquiry requested information on all persons in contact with mental health services in the year before suicide or within 12 months before homicide.

Jumping/multiple injuries
This method of suicide includes: jumping from a height, jumping or 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 (e.g. including schizophrenia and affective disorder).

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

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

ONS
Office for National Statistics.

Patient-initiated discharge
Self-discharge or discharge as a result of patient's actions, i.e. breach of patient contract or ward rules, e.g. drinking, violence.

Restriction order
A Mental Health Act provision used for mentally disordered offenders who have committed a serious violent offence.

Secure Units
RSU
Regional Secure Units – medium secure units for individuals who are thought to pose special risks, particularly of violence to others.

High Secure Hospital
Three units in England and Wales (Ashworth, Broadmoor, Rampton) which care for those who require high security.

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