



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

**ANNUAL REPORT:**  
England, Northern Ireland, Scotland and Wales

JULY 2013

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Responsibility for the analysis and interpretation of the data provided from government offices rests with the Inquiry and not with the original data provider.



## KEY FINDINGS

- Homicide by mental health patients has fallen substantially since a peak in 2006, and the figures for the most recent confirmed years, 2009-2010, are the lowest since we began data collection in 1997 - 33 cases reported in 2010 (England). Delays in the Criminal Justice System and in data processing may have contributed but it is likely that this is a true fall in patient homicide. Clinical explanations may include improved management of dual diagnosis patients (in whom the rate had previously risen) and the community treatment order, introduced in 2008. A similar fall has been found for homicide by people with schizophrenia (22 in 2010) and for people with symptoms of mental illness at the time of the offence (36 in 2010).
- Suicide by mental health patients has risen - 1,333 deaths in 2011 (England). A change to the coding of causes of death has contributed to this figure and changes to the Mental Health Minimum Dataset (MHMDS) method make comparisons with earlier years difficult but it is likely that this is a true rise in patient suicide, following a previous fall. The rise probably reflects the rise in suicide in the general population, which has been attributed to current economic difficulties; the proportion of patients dying by suicide who were unemployed has risen in England and Northern Ireland.

An apparent rise in Scotland is largely explained by the same coding change but the adjusted figure for patient suicide is still comparatively high. Increases in Wales and Northern Ireland are based on small numbers and should be treated with caution.

- In recent years there have been more suicides under home treatment or crisis resolution than under in-patient care (all countries). A substantial proportion of these deaths occur in patients who live alone or have refused treatment - home treatment may not be suitable for these patients without close supervision.
- Hanging remains the main method in patient suicides in England, Northern Ireland and Wales and has risen in these countries during the period 2001-2010. In Scotland, figures for hanging and self-poisoning are similar with self-poisoning slightly more common.
- Opiates are now the main substances taken by patients in fatal overdose (all countries). We do not know enough about which drugs are used and from where they are obtained.
- There is a continuing problem of substance misuse in patient suicide: our figures are high for alcohol misuse (highest in Northern Ireland and Scotland), drug misuse (highest in Scotland) and dual diagnosis (in all countries). In homicide, the figures are even higher: alcohol misuse (highest

in Northern Ireland), drug misuse (highest in Scotland) and dual diagnosis (highest in Scotland).

- CTOs may have contributed to reduced patient homicide (England): our figures show that homicides have fallen in all patients and in those with schizophrenia, including those who were refusing treatment or losing contact with the service. However, these are early figures and further monitoring is needed. The effect of CTOs on patient suicide is unclear. CTO suicides may follow treatment refusal or loss of contact which they are designed to prevent, suggesting they could be applied more effectively (England, Wales, and Scotland).
- Patient suicide is still frequently preceded by missed contact with services (England, Scotland and Wales) and in Northern Ireland the numbers of such cases increased during the report period. Northern Ireland is the only UK country not to introduce assertive outreach teams (or an equivalent) although in England these teams are in some places being reabsorbed into general Community Mental Health Teams (CMHTs).
- Suicides by in-patients continue to fall (all countries), including in detained patients and those who have absconded.
- Victims of patient homicide are more likely to be spouses or family members than strangers (all countries).



- Sudden Unexplained Death (SUD) in in-patients continues to be associated with previous poor physical health (England and Wales). A quarter of SUD patients are under 45 years - physical ill-health is also common in this group and polypharmacy is found in 20% (England).
- Comprehensive figures for homicide and mental illness show that in 2001-2010 an average of 74 patients per year were convicted of homicide in the UK. When people with symptoms of mental illness are added, the total rises to an average of 115 per year. These are perpetrators - the corresponding figure for victims, taking account of multiple homicides, is 123 per year. All these figures appear to be falling.

## RECOMMENDATIONS FOR SERVICES

### Services should:

- maintain services for dual diagnosis patients and the use of CTOs in the care of people with risk of violence
- address the economic difficulties of patients who might be at risk of suicide, ensuring they receive advice on debts, housing and employment
- improve safety in crisis resolution/home treatment (CR/HT) as a priority for suicide prevention in mental health care; particular caution is needed with patients who live alone or refuse treatment and when patients are discharged from hospital into CR/HT
- be vigilant about the suicide risk from opiates, currently the main self-poisoning method; clinicians should check patients' access to opiates
- continue the successful safety focus on wards, including measures to prevent absconding and ensure safe detention
- strengthen specialist services and risk management for patients who are misusing alcohol or drugs
- use CTOs more effectively to address treatment refusal and loss of contact in patients at risk of suicide
- assess risk of violence to spouses and family members and collaborate with social care and child protection services
- ensure that all in-patients, including younger in-patients, are included in reviews of physical health and polypharmacy
- introduce or maintain assertive outreach services
- engage in the debate over public concerns about the risk of homicide and the potential and limits of prevention by mental health services.



## PRESENTATION OF FINDINGS

In this report, findings are presented for England, Northern Ireland, Scotland, and Wales for:

- Suicide
- Homicide

Findings for the Sudden Unexplained Death study are presented for England and Wales only.

### England and Wales

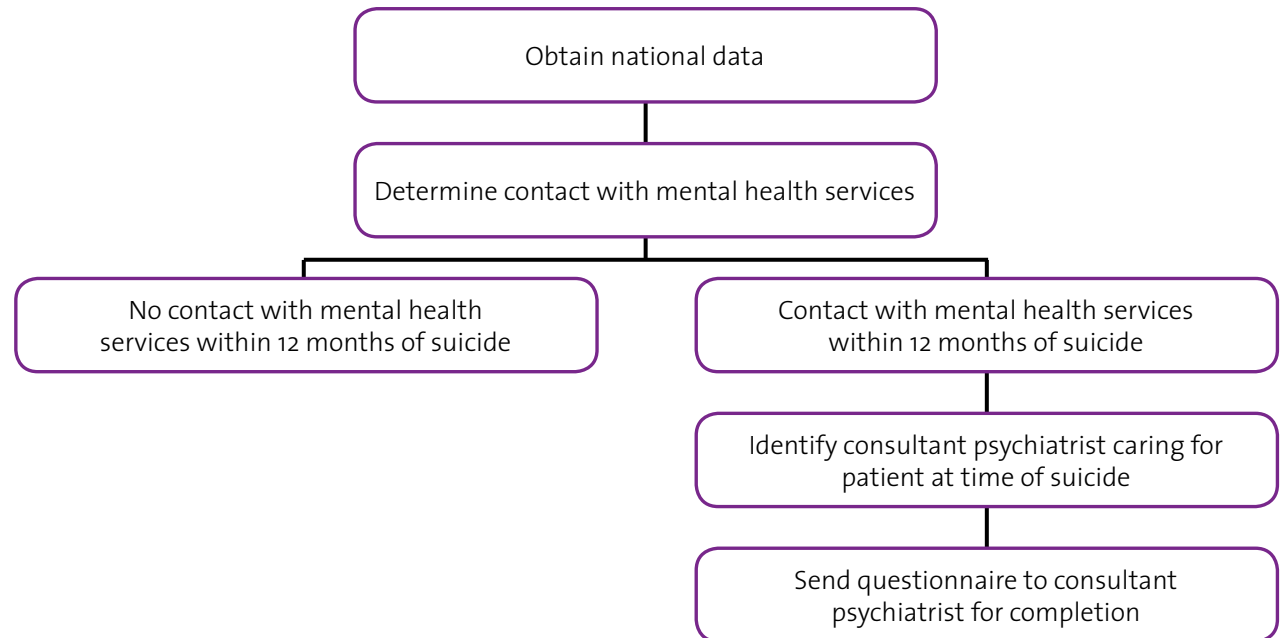
#### Method of data collection

The method of data collection for suicide, homicide, and sudden unexplained death is similar in England and Wales.

#### Suicide

This report covers deaths by suicide for the period January 2001 to December 2011. Information on all general population suicides (i.e. deaths by intentional self-harm and deaths from undetermined intent) by individuals aged 10 and over is collected from the Office for National Statistics (ONS).<sup>1</sup>

Figure A: The stages of data collection for cases of suicide



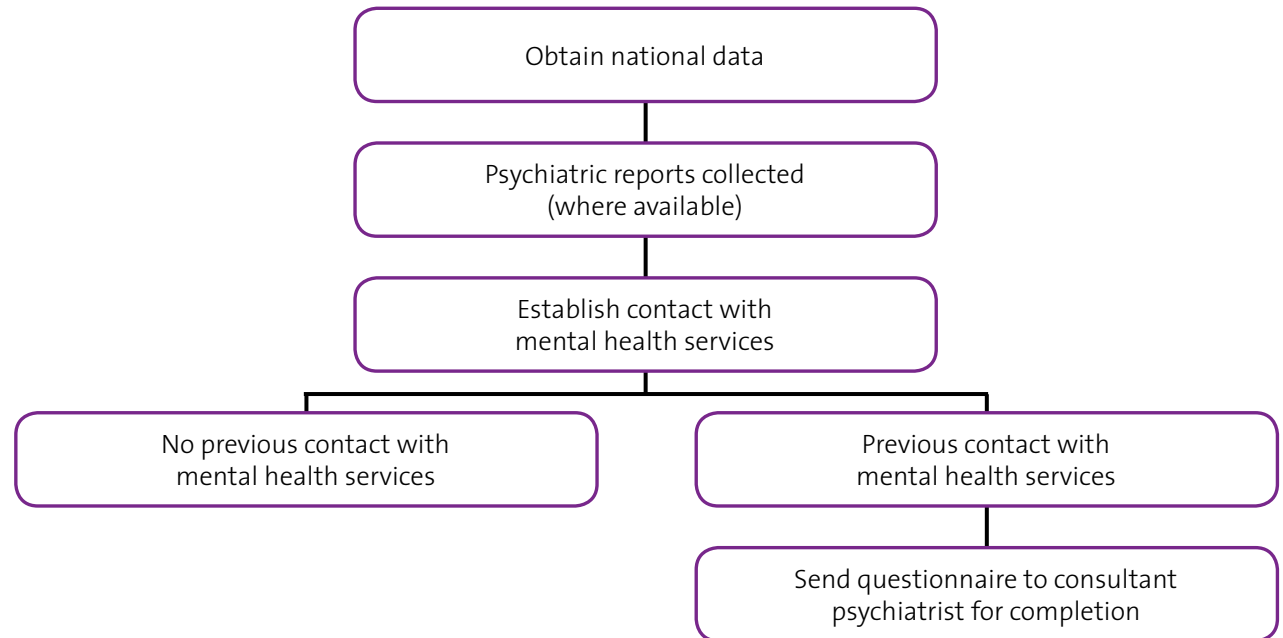


## Homicide

This report covers people convicted of homicide, presented by year of conviction between January 2001 and December 2011. The Inquiry is notified of all convictions for homicide by the Home Office Statistics Unit of Home Office Science.<sup>2</sup> Homicides not leading to conviction are not included in this report. Identification of mental illness in non-patients relies on psychiatrists preparing a report for the court, which the Inquiry then obtain. Not all perpetrators who had symptoms of mental illness at the time of the offence were patients and not all patients had symptoms of mental illness at the time of the offence.

General population homicide conviction figures in sections 1.2 and 4.2 are provided for the period of the report as context for our data on homicides by people with mental illness. A full analysis of homicide offences recorded by police in England and Wales was published by the ONS in February 2013.<sup>3</sup>

Figure B: The stages of data collection for cases of homicide



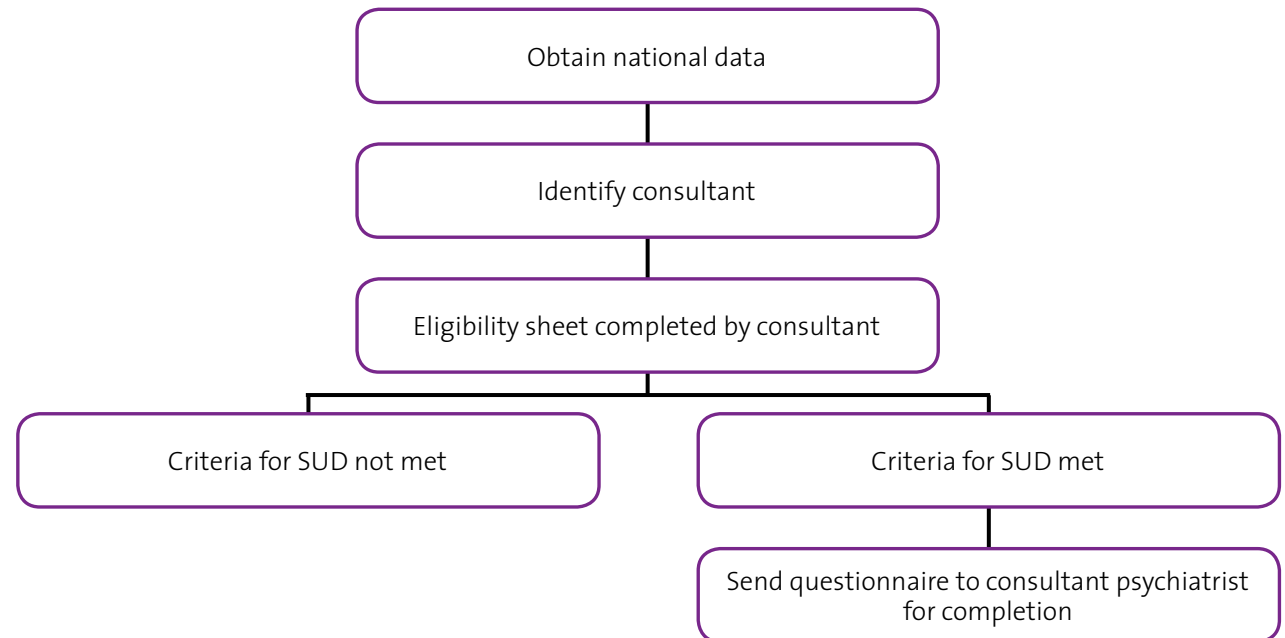
## Sudden unexplained death

This report covers sudden unexplained death (SUD) in psychiatric in-patients for the period January 2001 to December 2011. To identify cases of SUD, data on all patient deaths within psychiatric and learning disabilities in-patient hospitals in England are provided by Hospital Episode Statistics (HES) <sup>4</sup>, previously the NHS-Wide Clearing Service. For Wales, data are provided by Health Solutions Wales (HSW).<sup>5</sup> During the report period the number of all in-patient deaths notified to the Inquiry for England was 5,859 and in Wales 589.

A summary of our data collection processes are outlined in Figures A-C. A detailed description of data collection methods in England and Wales is available in previous reports: *Annual Report (2009, 2010)* <sup>6,7</sup>, and *Avoidable Deaths (2006)* <sup>8</sup>, which are accessible on our website [www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci](http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci).

Information collected (including diagnosis) was based on the clinical judgement of the consultant caring for the patient.

Figure C: The stages of data collection for sudden unexplained death



## Data completeness

Data completeness for patient suicides is 97% for England and 98% for Wales in the report period 2001-2010. Completeness is lower in the final year reported (65% for England, 62% for Wales), reflecting the time required to process the data. For patient homicides, data completeness is 95% in England in the report period 2001-2010. Completeness was 37% in the final year reported for England.

For the final year of the patient suicide and homicide analysis we therefore estimate the final number of cases based on data completeness in previous years (presented as a dotted line in the figures). Projected figures are based on the average annual return of Inquiry questionnaires, i.e. adjusted to an assumed final figure of 97% for England and 98% for Wales, and for homicide in England, 95%. For homicide in Wales, numbers are too small to calculate projected figures. For sudden unexplained death, actual figures are shown, including those in the final year.

## Scotland

### Method of data collection

#### Suicide

This report covers deaths by suicide for the period January 2001 to December 2011. Information on all general population suicides (as defined in England and Wales) is collected from the General Register Office for Scotland (GROS).<sup>9</sup>

#### Homicide

This report covers homicide convictions, presented by year of conviction between January 2001 and December 2011. Information is collected from the Management Information Analysis Team at the Scottish Court Service, with additional data (including relationship between perpetrator and victim) obtained from the Scottish Crown Office and Procurator Fiscal Service. Homicides not leading to conviction are not included in this report. Identification of mental illness in non-patients relies on psychiatrists preparing a report for the court, which the Inquiry then obtain. Not all perpetrators who had symptoms of mental illness at the time of the offence were patients and not all patients had symptoms of mental illness at the time of the offence.

General population homicide conviction figures in section 3.2 are provided for the period of the report as context for our data on homicides by people with mental illness. A full analysis of homicide offences recorded by police in Scotland was published by the Scottish Government in December 2012.<sup>10</sup>

See Figures A-B for a summary description of our data collection processes. A detailed description of data collection methods in Scotland are described in a previous report for Scotland, *Lessons for Mental Health Care in Scotland*<sup>11</sup>, accessible on our website [www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci](http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci).

Information collected (including diagnosis) was based on the clinical judgement of the consultant caring for the patient.



## Data completeness

Data completeness for patient suicides is 98% in the report period 2001-2010. Completeness is lower in the final year reported (85%), reflecting the time required to process the data. For patient homicide, data completeness is 95% in the report period 2001-2010 and 50% complete in the final year.

As in England and Wales, for the final year of the patient suicide and homicide analysis we estimate the final number of cases based on data completeness in previous years (presented as a dotted line in the figures). Projected figures are based on the average annual return of Inquiry questionnaires, i.e. adjusted to an assumed final figure of 98% complete for suicide and 95% for homicide.

## Northern Ireland

### Method of data collection

#### Suicide

This report covers deaths by suicide for the period January 2001 to December 2011. Information on all general population suicides (as defined in England and Wales) is collected from the Northern Ireland Statistics and Research Agency (NISRA).<sup>12</sup>

#### Homicide

This report covers homicide convictions, presented by year of conviction between January 2001 and December 2011. Information is collected from the Northern Ireland Courts and Tribunal Service and the Coroners Service for Northern Ireland. Homicides not leading to conviction are not included in this report. Identification of mental illness in non-patients relies on psychiatrists preparing a report for the court, which the Inquiry then obtain. Not all perpetrators who had symptoms of mental illness at the time of the offence were patients and not all patients had symptoms of mental illness at the time of the offence.

General population homicide conviction figures in section 2.2 are provided for the period of the report as context for our data on homicides by people with mental illness. An analysis of homicide offences recorded by police in Northern Ireland was published by the Police Service of Northern Ireland in July 2012.<sup>13</sup>

See Figures A-B for a summary description of our data collection processes. A detailed description of data collection methods in Northern Ireland are described in a previous report for Northern Ireland, *Suicide and Homicide in Northern Ireland*<sup>14</sup>, accessible on our website [www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci](http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci).

Information collected (including diagnosis) was based on the clinical judgement of the consultant caring for the patient.

## Data completeness

Data completeness for patient suicides is 99% in the report period 2001-2010. Completeness is lower in the final year reported (73%), reflecting the time required to process the data. As in England, Wales, and Scotland, for the final year of the patient suicide analysis we estimate the final number of cases based on data completeness in previous years (presented as a dotted line in the figures). Projected figures are based on the average annual return of Inquiry questionnaires, i.e. adjusted to an assumed final figure of 99% complete. For homicide in Northern Ireland, numbers are too small to calculate projected figures.



## ANALYSIS

The following section describes how data were analysed in this report.

### Trends over time

To examine for statistically significant time trends, trend tests were carried out using categorical data methods in Stata v12.<sup>15</sup> Poisson models were fitted with the number of suicides or homicides per year as the outcome and year as a linear predictor. For rates, general population per year was the exposure. Within the patient sample, the exposure was the total number of suicides or homicides per year. Tests for trends over time were calculated excluding the incomplete final year, i.e. 2001-2010 for suicide and homicide, for both general population and patients. For each model, the likelihood-ratio-test p-value and the predictor (and 95% confidence intervals) for year were examined.

### Rates of suicide and homicide

General population and patient rates for suicide were calculated using mid-year population estimates revised in light of the 2011 census (age 10 and over) as denominators obtained from ONS

and GROS. These were also used to calculate rates for suicide by NHS region (England) and Health Boards (Northern Ireland, Scotland, and Wales). The Health Board rates in Wales and Scotland reflect the new health area boundaries that came into place on 1 October 2009 (Wales) and 1 April 2006 (Scotland). Mid-year population estimates obtained from GROS have been revised for the period 2002 to 2011 only. Therefore rates by Scottish Health Boards are reported for this time period only. In April 2009, the former regional Health Boards of Northern Ireland were merged to form one Health and Social Care Board. However, in order to indicate geographical patterns of suicide, we present suicide rates for each of the Health and Social Care Trusts.

General population and NHS region rates were also calculated for homicide (England only).

Discrepancies may arise between Inquiry national numbers and rates and those presented by the ONS, the Department of Health<sup>16</sup>, the Scottish Public Health Observatory website<sup>17</sup>, and the NISRA website<sup>12</sup> due to differences in measurement described in *Avoidable Deaths*<sup>8</sup>, *Lessons for Mental Health Care in Scotland*<sup>11</sup>, and *Suicide and Homicide in Northern Ireland*.<sup>14</sup>

The main reason for the difference in our general population numbers and rates compared to those published on the ONS, Scottish Public Health Observatory and NISRA websites is that our figures are based on the date of death *occurrence* while other figures are based on the date the death was *registered*. In England, Wales and Northern Ireland, the period of time between when a suicide occurs and when the death is registered can be a number of months. In Scotland delays in registration are minimal as deaths are required to be registered within 8 days.

Rates also differ because Inquiry calculations are based upon the number of people in the general population aged 10 and over. ONS rates include suicides aged 15 and over, whilst GROS and NISRA rates are based on the whole population (including those aged under 10) which means the denominator is bigger and the resulting rates are lower. Both ONS and GROS also calculate rates based on European age-standardised population data (to adjust for differences in age structure across countries). Further details regarding rate differences can be found in the reports *Lessons for Mental Health Care in Scotland* (page 27)<sup>11</sup> and *Suicide and Homicide in Northern Ireland* (page 23).<sup>14</sup>



In addition to general population suicide rates, the Mental Health Minimum Dataset (MHMDS)<sup>18</sup> was used to ascertain rates of suicide in those in contact with NHS mental health services in England. Rates of suicide (for England only based on clinical denominators from the MHMDS) were calculated for the years that currently overlap with Inquiry data (2004-2011) (see section 1.1.2, Figure 7). During this period there was an average of 1,233,551 people in contact with NHS mental health services each year in England.

In April 2011 a new version of the MHMDS (version 4) was introduced with changes in data collection and processing. This has led to improvements to the accuracy of returns by providers and now also incorporates NHS funded services provided by Independent Sector Providers. This has resulted in a significant increase to overall numbers of people in contact with mental health services in 2011/2012.<sup>19</sup>

### Changes to the coding of causes of death

In 2011, the introduction of a new version of the International Classification of Disease (ICD-10) software (version 2010) changed the coding rules for certain drug-related deaths.

Consequently, some deaths from 'drug abuse' and 'acute intoxication' previously coded under 'mental and behavioural disorders' are now coded as 'self-poisoning of undetermined intent' and therefore included in suicide statistics. Both ONS and the National Records of Scotland (NRS) have implemented these changes to coding practice. The new coding rules have not made a significant impact to suicide figures in England and Wales; analysis by ONS showed a 2% increase in undetermined intent deaths.<sup>20</sup> In contrast, it has made a significant difference to the number of suicides recorded in Scotland. Figures from the NRS, for example, show there were 772 registered suicides in 2011 using the old coding rules, and 889 suicides using the new rules ([www.scotpho.org.uk](http://www.scotpho.org.uk)). Comparisons between suicide numbers and rates in Scotland for 2001 to 2010, and 2011 should, therefore, be treated with caution as these two time periods are not directly comparable. More information on the change in coding rules can be found on the ONS website ([www.ons.gov.uk](http://www.ons.gov.uk)) and the Scottish Public Health Observatory (ScotPHO) website ([www.gro-scotland.gov.uk](http://www.gro-scotland.gov.uk)).

### Narrative verdicts

Over the past decade, coroners have increasingly returned narrative verdicts. These record the circumstances of a death rather than providing a 'short form' verdict such as suicide, accident, or natural causes. Prior to 2011, some narrative verdicts were coded as accidental deaths where intent was not specified which may have led to an underestimation of suicide. However, in 2011 guidance was issued to coroners in England and Wales when returning narrative verdicts to provide clearer information on the intent of the deceased. This has led to improvements to the coding of narrative verdicts by the ONS coding team, and some cases which would previously be coded as accidental may now be coded as suicide. The impact of these changes, therefore, is to potentially increase the number of suicides in 2011, although the anticipated increase is likely to be small. Further information can be found on the ONS website ([www.ons.gov.uk](http://www.ons.gov.uk)).

The Inquiry database is dynamic. Changes in annual figures will occur subject to further information received from coroners or as a result of additional court hearings, e.g. following a successful appeal against a homicide conviction.



# 1. ENGLAND

## 1.1 SUICIDE

Between 2001-2011, the Inquiry was notified of 48,814 deaths in the general population that received a suicide or undetermined verdict. These are referred to as suicides throughout the report.

### 1.1.1 Suicide in the general population

- There are usually 4,000-4,500 suicides per year, with a male to female ratio of 3:1 (Table 1).
  - Our figures are based on date of death, unlike ONS who use date of death registration (see page 13).
  - Delayed registration means that figures for the most recent years presented here will increase; the figure in 2010 which we published last year is now 7% higher. A 7% increase in 2011 would increase the figure to 4,388 suicides.
  - This would represent a small increase over 2009-2010, although these figures may be low because of uncertainty in the coding of narrative verdicts.
- Rising figures for 2008 and 2011 are assumed, in part, to reflect financial pressures leading to unemployment and debt.
  - Despite an increase in 2008, there was an overall fall in the number and rate of suicides between 2001 and 2010 (Table 1; Figure 1). This pattern was seen in both males and females.
  - There was a fall in male suicide rates in those aged under 25, 25-34, and 65 and over but an increase in those aged 45-64 (Figure 2). In females, rates fell in those aged 25-34, 35-44, and 65 and over (Figure 3).

**Table 1: Number of suicides in the general population, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	3442	3439	3430	3427	3312	3197	3229	3466	3285	3225	3155
Female	1154	1187	1228	1241	1151	1024	1015	1146	1037	1078	946
Total	4596	4626	4658	4668	4463	4221	4244	4612	4322	4303	4101





Figure 1: Rates of suicide in the general population, by gender

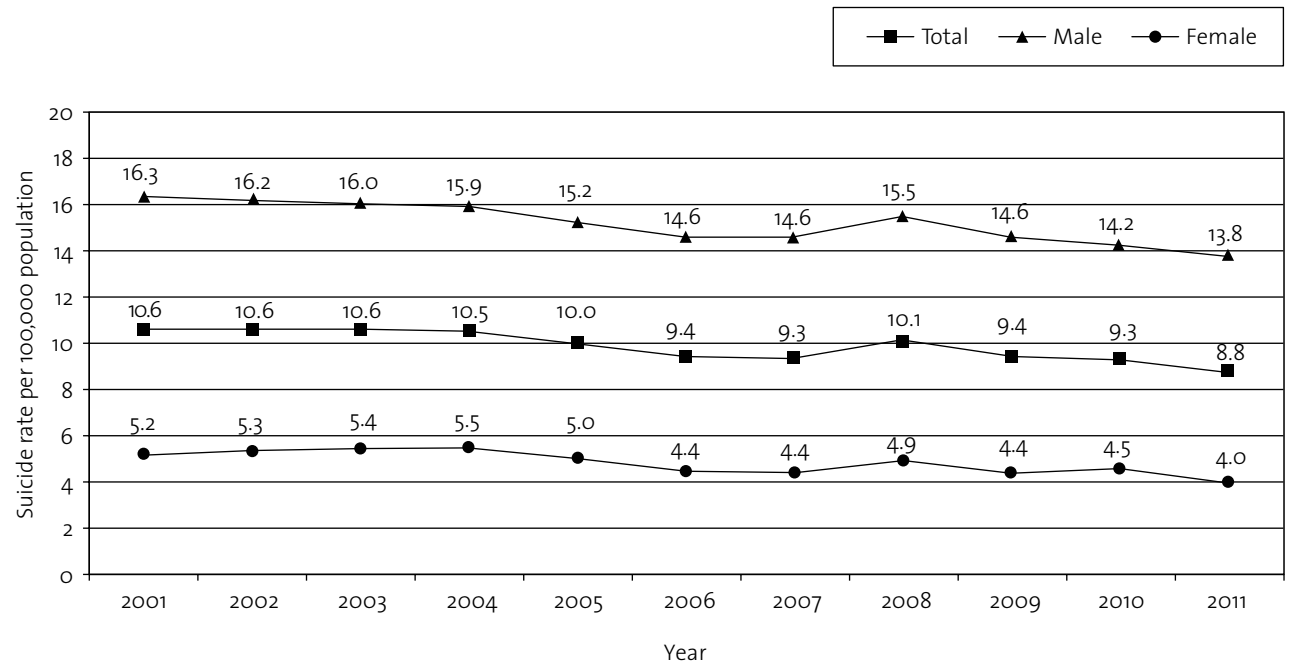




Figure 2: Rates of male suicide in the general population, by age-group

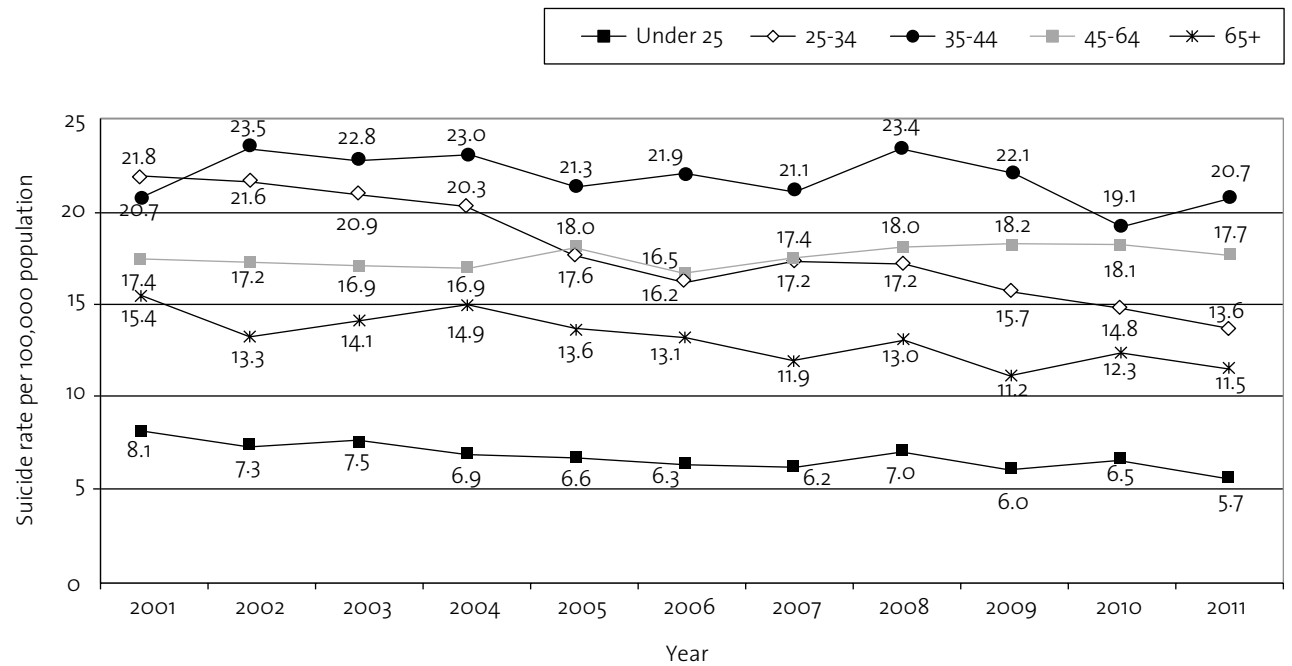
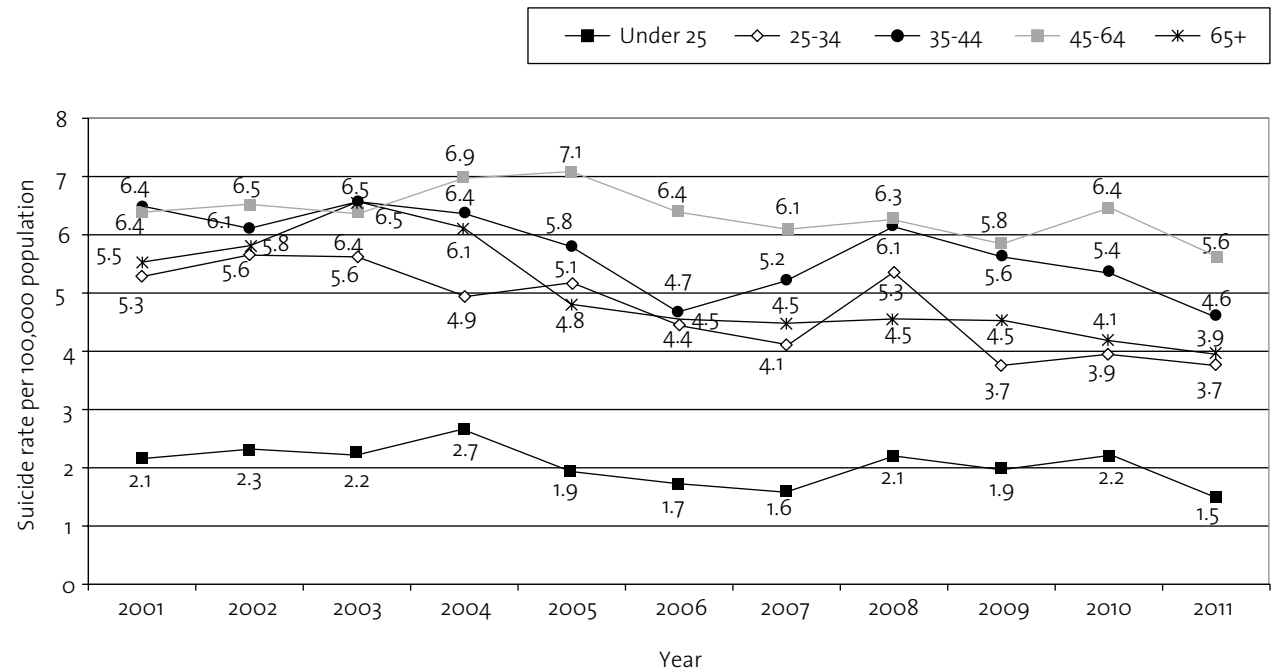


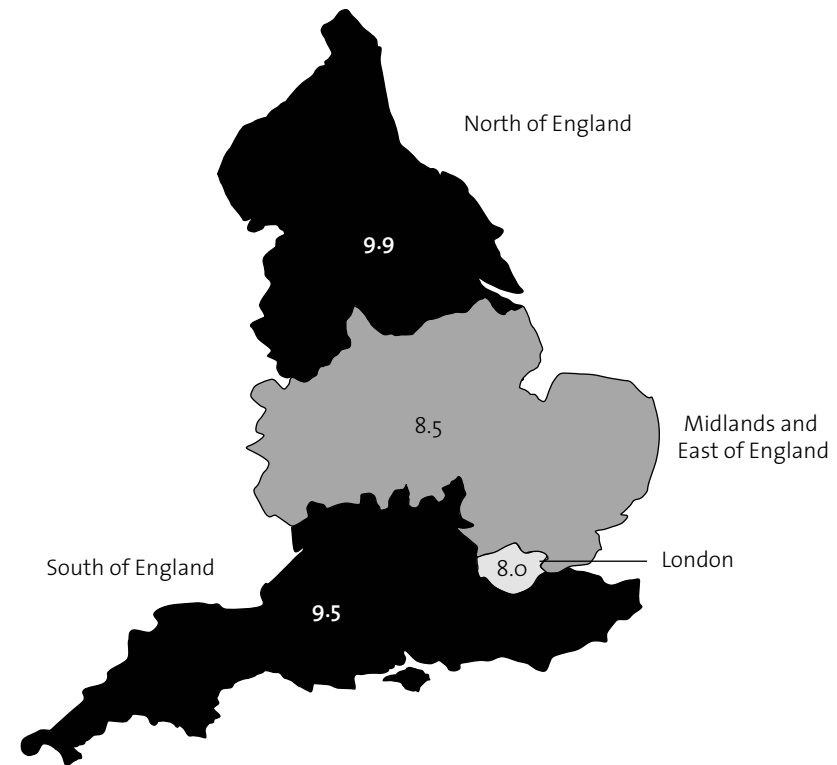
Figure 3: Rates of female suicide in the general population, by age-group



## Variation in suicide by NHS region

- There was some variation in suicide rates by region of residence (by NHS England boundaries) at the time of death (average rate 2009-2011). The highest rate of suicide was in the North of England at 9.9 per 100,000 population and the lowest in London at 8.0 per 100,000 population (Figure 4).
- These figures are based on populations aged 10 and over. ONS uses populations aged 15 and over as a denominator (see page 13) and our figures are therefore lower.

Figure 4: Rate of suicide per 100,000 population by NHS region of residence (average rate 2009-2011)



## Method of suicide

- The most common methods of suicide were hanging/strangulation (referred to as hanging in the remainder of this report) (44%), self-poisoning (overdose) (23%), and jumping/multiple injuries (mainly jumping from a height or being struck by a train) (10%). Less frequent methods were drowning (5%), carbon monoxide (CO) poisoning (4%), cutting/stabbing (3%), and firearms (2%).
- Over the period 2001-2010 there were changes in method of suicide. Suicide deaths by hanging increased, although they have fallen since a peak in 2008 (Figure 5). Deaths by self-poisoning decreased over the report period, and those by jumping/multiple injuries did not change. Of the less common methods, deaths by drowning and CO poisoning decreased (Figure 6).
- The fall in CO poisoning deaths is related to the introduction of catalytic converters in 1993.<sup>21</sup>
- Firearms account for 2% of all suicides. This is a more common method in countries with greater gun availability.
- The fall in drowning is unexplained.

Figure 5: Suicide in the general population: main causes of death

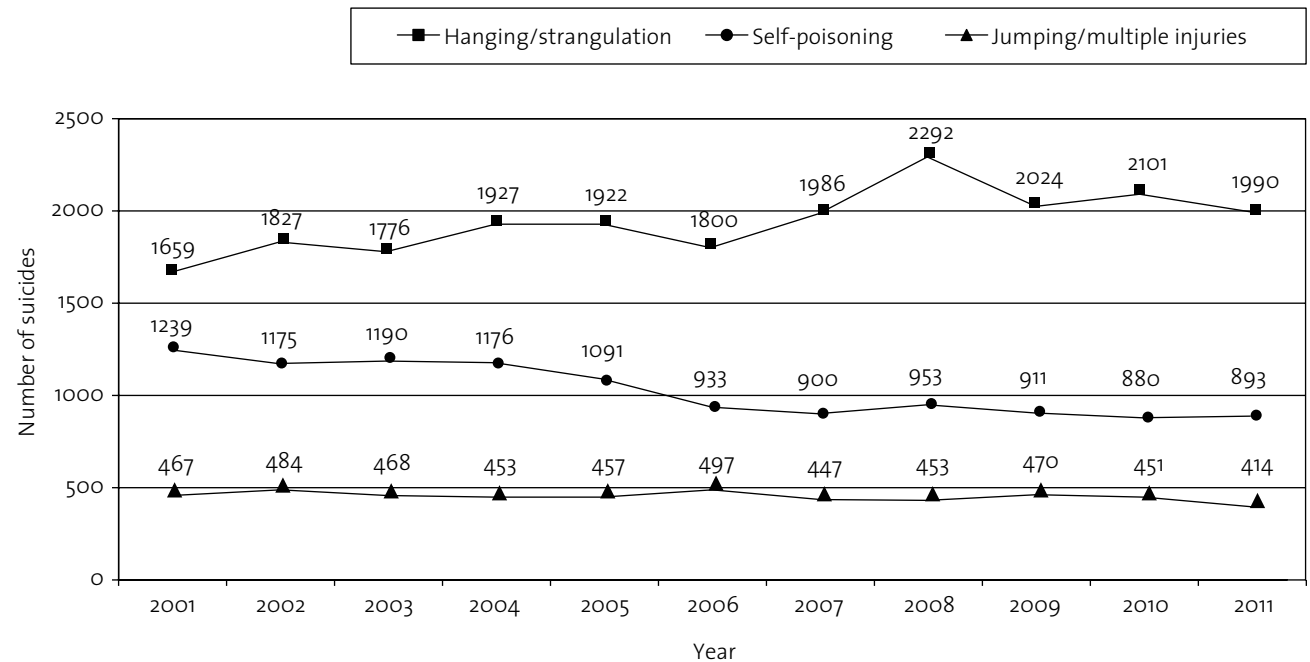
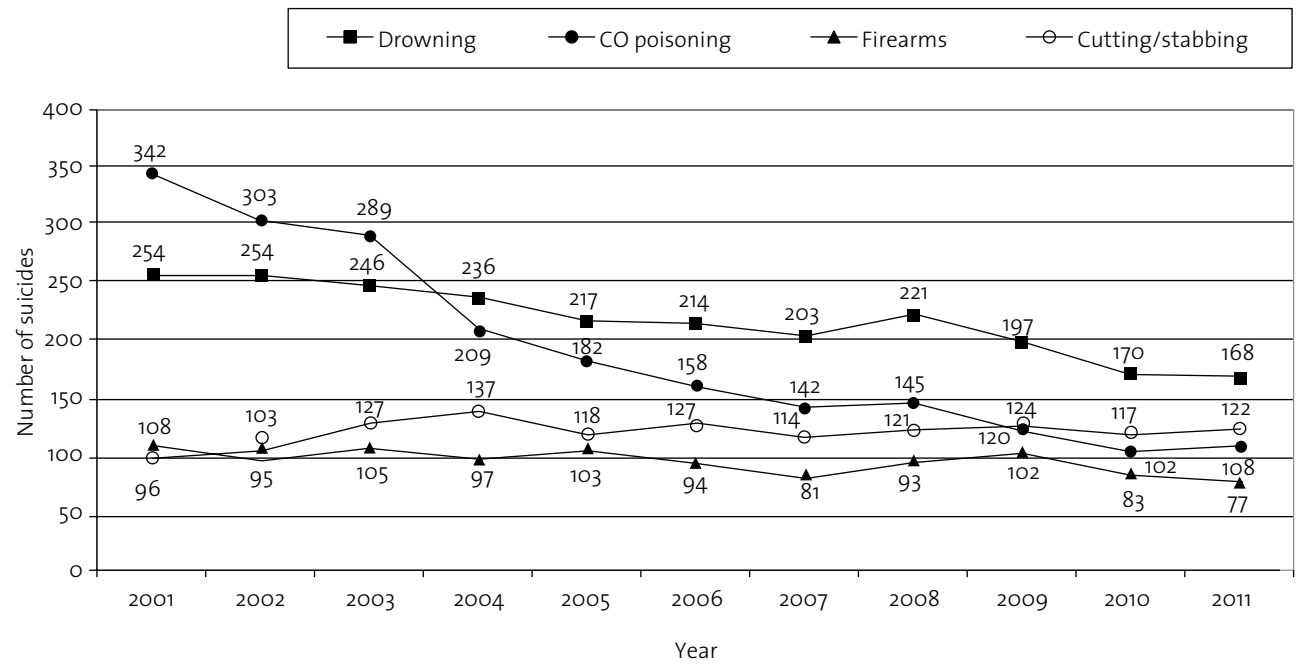


Figure 6: Suicide in the general population: other causes of death



## 1.1.2 Patient suicide

### Patient suicide: numbers and rates

- During 2001-2011, 13,469 deaths (28% of general population suicides) were identified as patient suicides, i.e. the person had been in contact with mental health services in the 12 months prior to death. This represents an average of 1,224 patient suicides per year.
- Our figure for suicide by patients shows a rise in 2011. This figure should be interpreted cautiously as it is a provisional figure based on incomplete data. However, we are predicting a higher number of patient suicides than in recent years (Table 2).

- Part of the increase in patient suicide in 2011 may reflect rising numbers of people under mental health care. To address this, we have calculated rates with figures from the Mental Health Minimum Dataset (MHMDS) as the denominator (Figure 7). Falling rates are seen from 2004. However, changes in MHMDS methodology means rates in 2011 are not directly comparable to earlier years (see page 14).
- Suicides in patients aged under 25 and those aged 25-44 fell in the report period. A rise in 2011 is projected for most age-groups but not in those aged under 25 (Figure 8).

- 88 (1%) patient suicides were aged under 18, an average of 8 per year, with no overall trend.
- In 2008-2010, a higher proportion of patients were unemployed (44%) compared to 2001-2003 (40%).

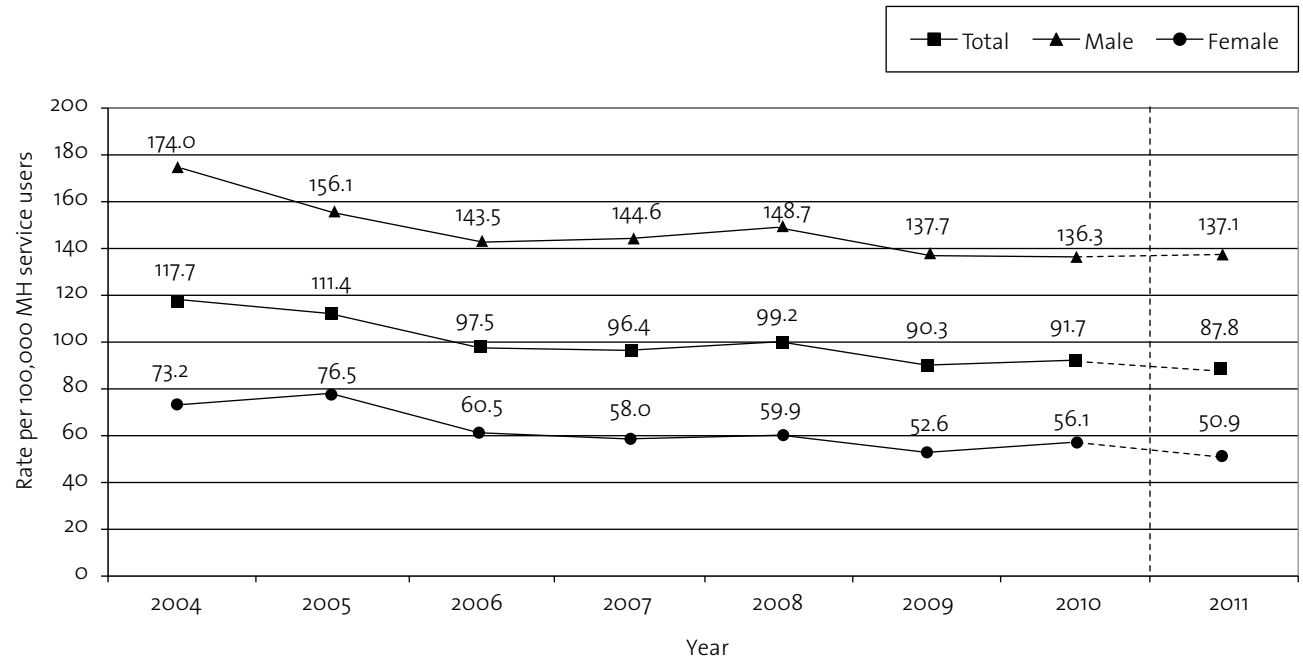
**Table 2: Number of patient suicides, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Male	845	834	800	866	794	740	760	802	768	776	909
Female	416	416	456	451	482	382	378	403	368	399	424
Total	1261	1250	1256	1317	1276	1122	1138	1205	1136	1175	1333

\* projected figure



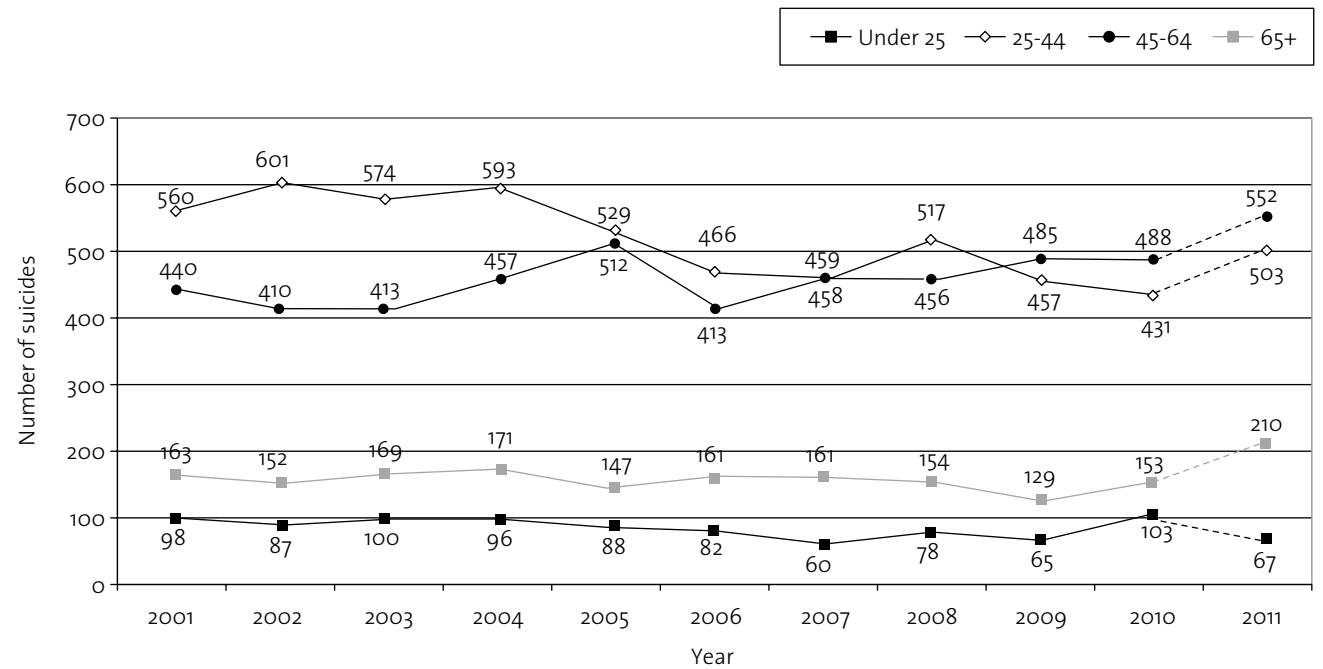
Figure 7: Rates of suicide per 100,000 mental health service users †



† The Mental Health Minimum Dataset (MHMDS) was used to calculate rates for the available years (2004-2011). Changes in MHMDS methodology means rates between 2004-2010 and 2011 are not directly comparable.



Figure 8: Number of patient suicides, by age-group





## Method of suicide by patients

- The most common methods of suicide by patients were hanging/strangulation (40%), self-poisoning (27%), and jumping/multiple injuries (16%).
- Hangings increased in number during 2001-2010 and a further rise is projected in 2011 (Figure 9).
- Self-poisoning fell overall in 2001-2010 but there has been no fall since 2006 (Figure 9). A projected rise in 2011 may be partly a re-coding effect (see page 14).
- Opiates were the most common type of drug in self-poisoning (708, 22%) (Figure 10). Of those who died using opiates, 18% had a primary diagnosis of drug dependence/misuse and 18% were under the care of drug services – this is high within our sample but still a minority. Twenty-seven percent of those aged under 25 who died by self-poisoning used opiates.
- The next most common substances used in deaths by self-poisoning were tricyclic antidepressants (15%) and paracetamol/opiate compounds (12%). The number of self-poisoning deaths by tricyclic antidepressants and paracetamol fell during 2001-2010 (Figure 10).

Figure 9: Patient suicide: main causes of death

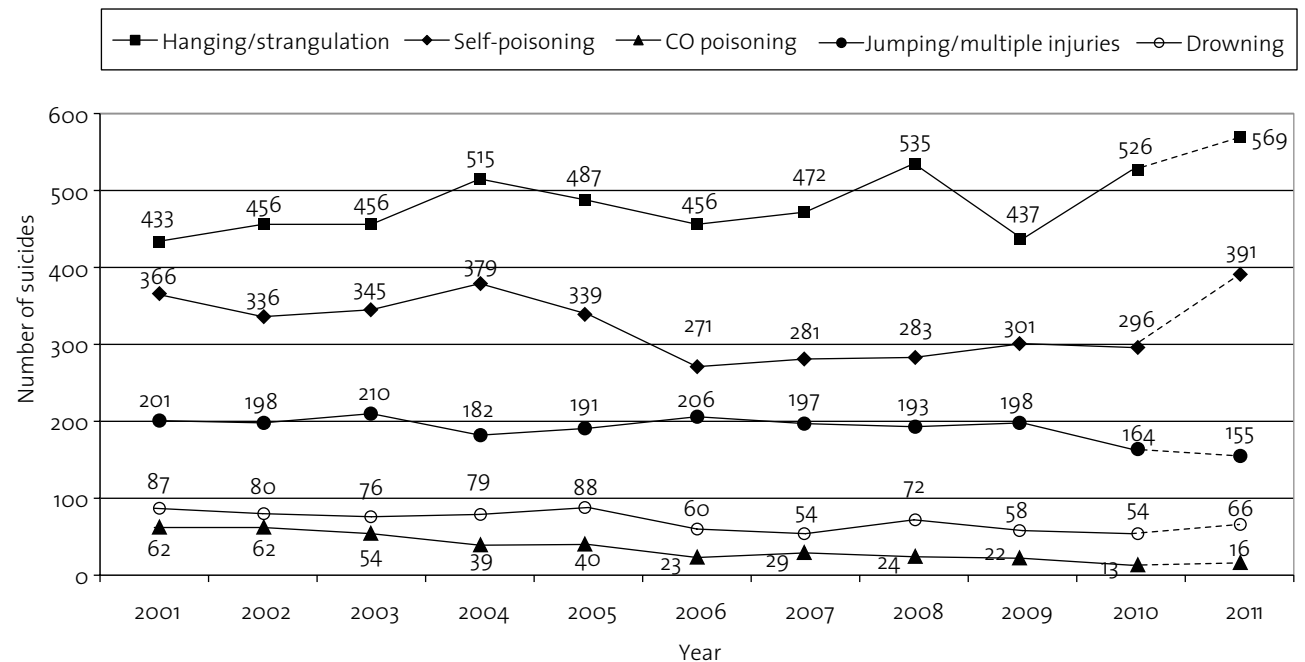
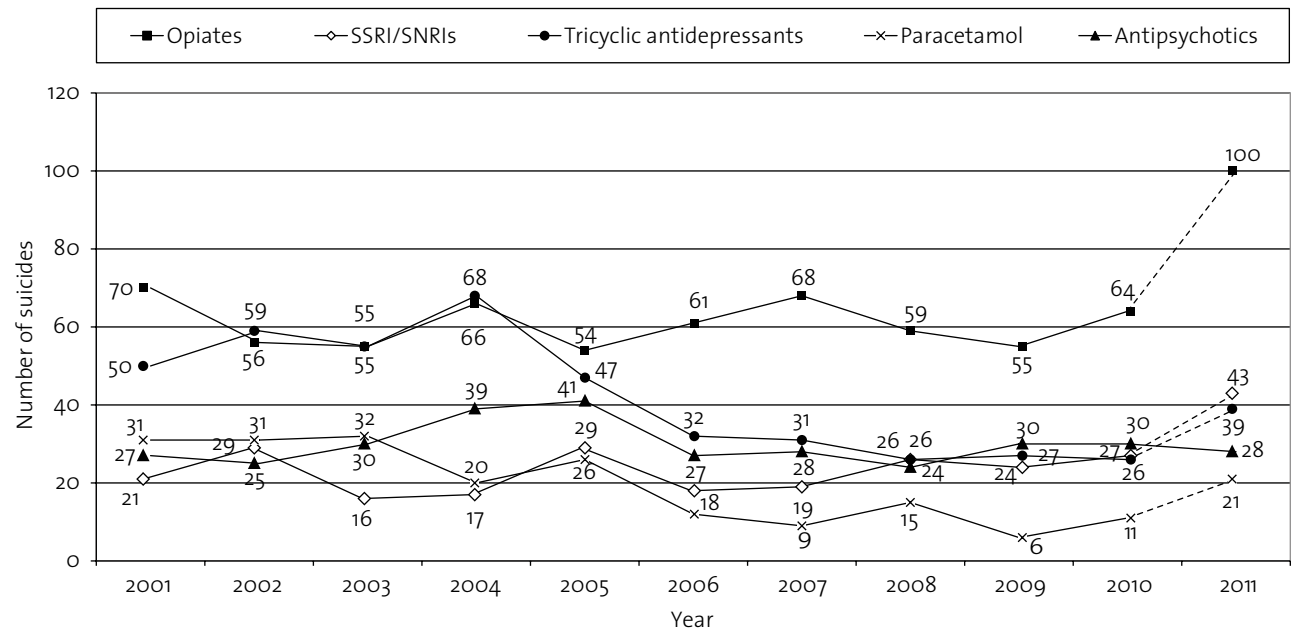


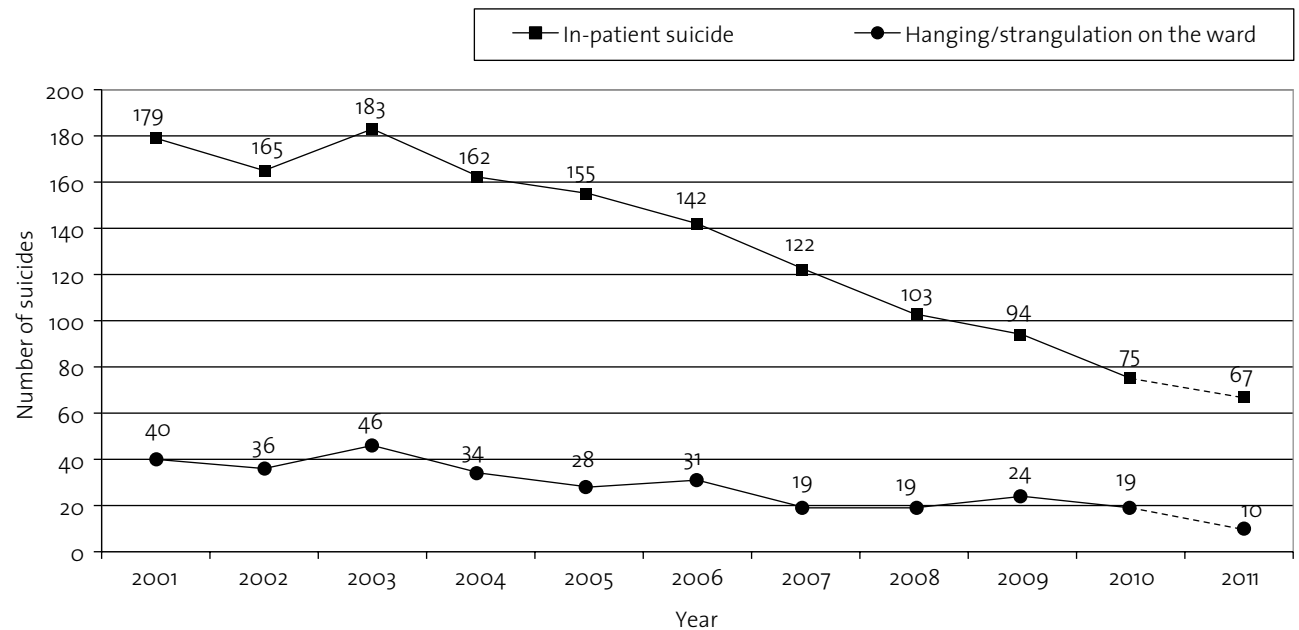
Figure 10: Patient suicide: main substances used in deaths by self-poisoning



## In-patient suicide

- There were 1,447 in-patient deaths by suicide during the report period, 11% of patient suicides, an average of 132 per year.
- From 2001 to 2010, there was a 58% fall in the number of in-patient suicides (Figure 11). We are projecting a continuation of this trend in 2011- a fall to 5% of all patient suicides. A reduction in the rate of in-patient suicide has previously been found (i.e. taking into account admission figures and time under in-patient care).<sup>22,23</sup>
- Deaths by hanging/strangulation on the ward are usually from low-lying ligature points (i.e. strangulation). After little change from 2007, we are projecting a further fall in 2011 (Figure 11).

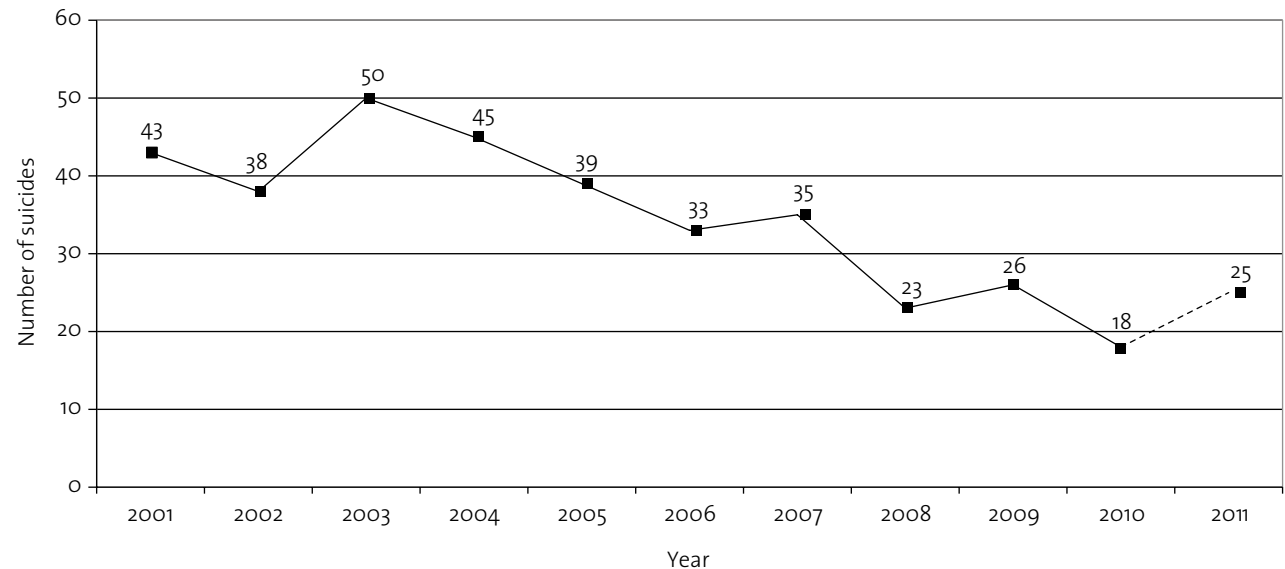
Figure 11: Patient suicide: number of mental health in-patients; number who died by hanging/strangulation on the ward



## Detained in-patients

- There were 375 (26%) in-patients detained under the Mental Health Act who died by suicide, an average of 34 per year. The number of these deaths decreased between 2001 and 2010 but have remained at an average of 23 per year since 2008 (Figure 12).
- 139 (38%) detained in-patients died on the ward; in 40% this was an open ward.
- 30 (8%) detained patients died in the first week of admission (compared to 17% of other in-patient suicides).

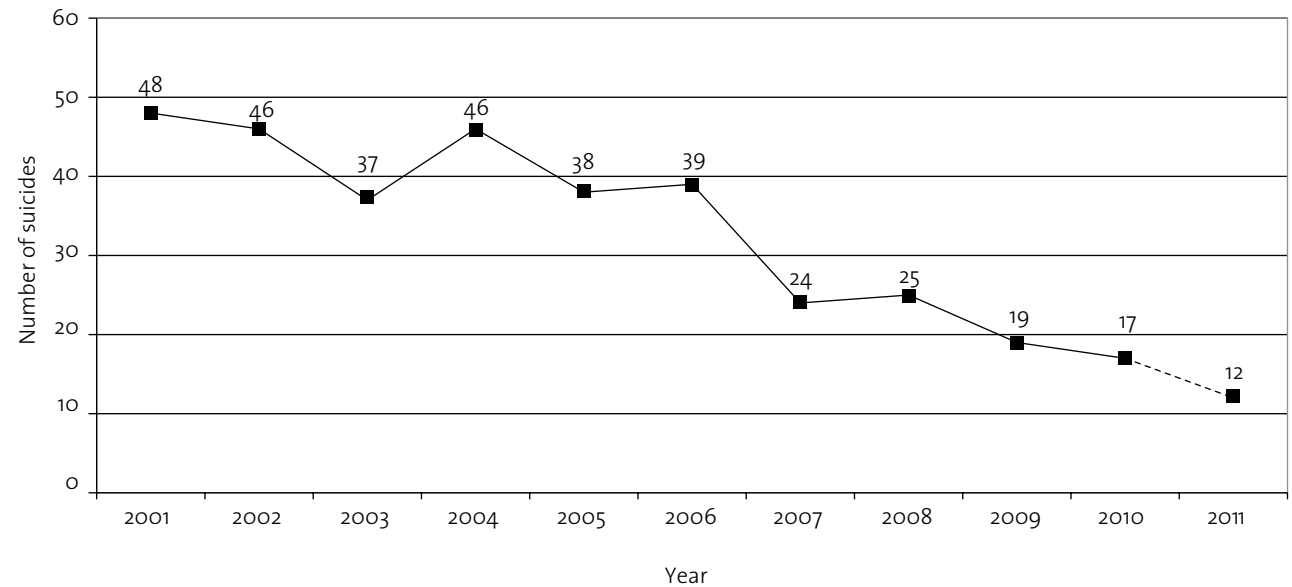
Figure 12: Number of detained in-patients who died by suicide



## Absconding

- There were 351 in-patients who died after absconding from the ward, 24% of all in-patient suicides, an average of 32 deaths per year.
- There was an overall fall in the number of suicides after absconding (Figure 13). Numbers have been substantially lower since 2006, and we are projecting a further fall in 2011.

Figure 13: Patient suicide: number of in-patients who absconded from the ward



## Community Treatment Orders

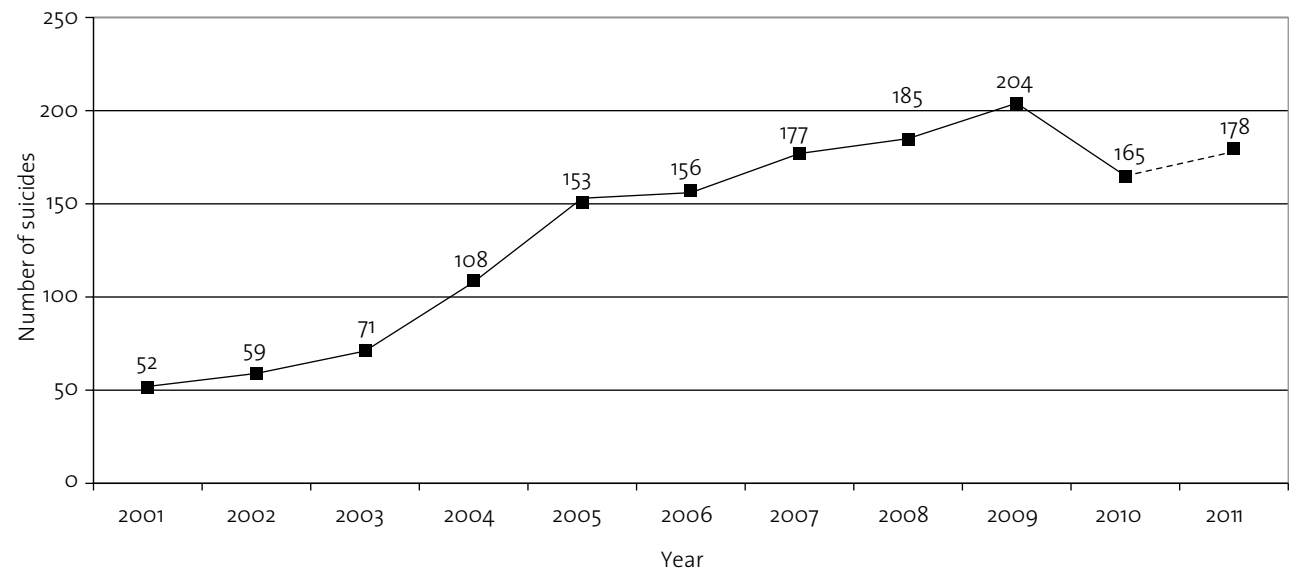
- There were 20 suicide deaths among patients subject to a community treatment order (CTO) between 2008-2011, less than 1% of all patient suicides in this time period. In addition, 13 patients who died had previously been on a CTO but were not on a CTO at the time of suicide.
- The rate of suicide in patients under CTO was 1.5 per 1,000 CTOs in 2008-2011. This figure is higher than the suicide rate for all patients, as would be expected as CTO patients are selected for risk and in general are recently discharged. It is not clear whether CTOs have reduced risk.
- 12 of the 20 deaths under CTO occurred within 3 months of hospital discharge.
- 4 suicides subject to a CTO had refused drug treatment in the month before death and 5 had missed the last appointment with services, 2 of these 9 patients had both refused treatment and missed the last appointment. In around half of these deaths, the CTO had not worked as intended.



## Crisis Resolution/Home Treatment

- There were 1,508 suicides in patients under crisis resolution/home treatment teams (CR/HT), 12% of the total sample, an average of 137 deaths per year. Since 2006, there have been 150-200 suicides per year under CR/HT (Figure 14).
- Since 2006 there have been more patient suicides under CR/HT than in in-patient care, reflecting a change in the nature of acute care. In the last 3 years over twice as many suicides have occurred under CR/HT.
- 462 (34%) CR/HT patients died within 3 months of hospital discharge. In many of these cases CR/HT will have been used to allow earlier discharge rather than as an alternative to admission. 181 (40%) of these patients died within 2 weeks of discharge.
- 198 (14%) CR/HT patients had refused drug treatment in the month before suicide.
- 628 (44%) CR/HT patients lived alone.

Figure 14: Patient suicide: number of patients under crisis resolution/home treatment services



## Patients recently discharged from hospital

- There were 2,480 suicides within 3 months of discharge from in-patient care, 18% of all patients and 21% of suicides by community patients, an average of 225 deaths per year.
- There was an overall fall in the number of post-discharge suicides between 2001-2010, although our projected figures show a rise in 2011 (Figure 15).
- Post-discharge suicides were most frequent in the first week after leaving hospital when 375 deaths occurred, an average of 34 per year, 15% of all suicides within 3 months of hospital discharge (Figure 16).

Figure 15: Patient suicide: number who died within 3 months of in-patient discharge

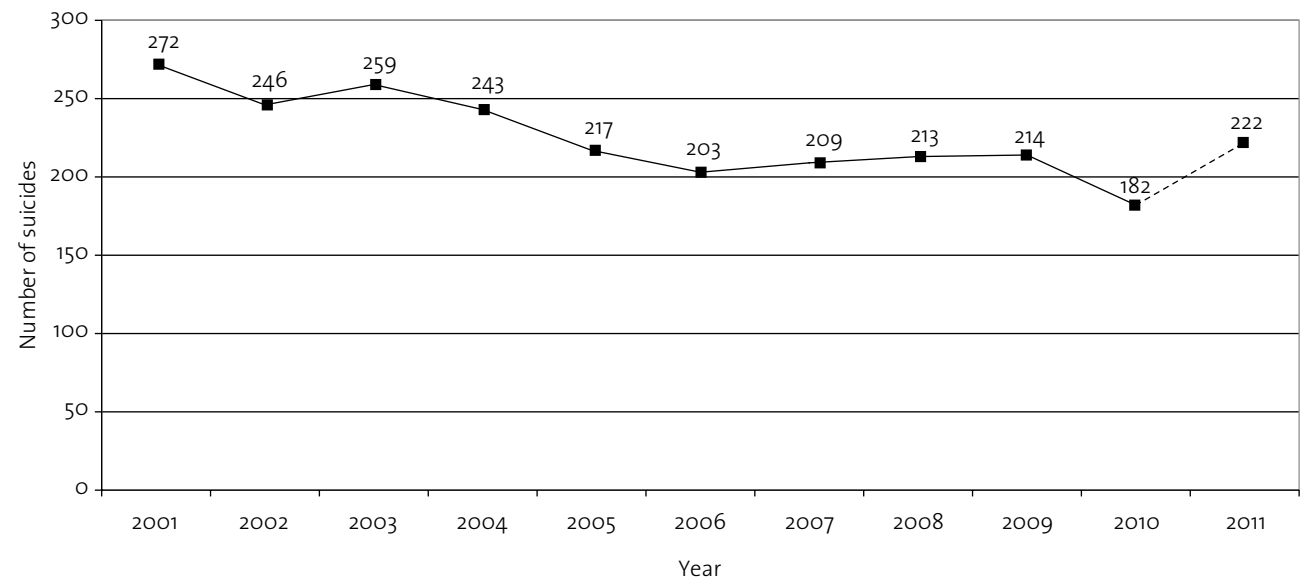
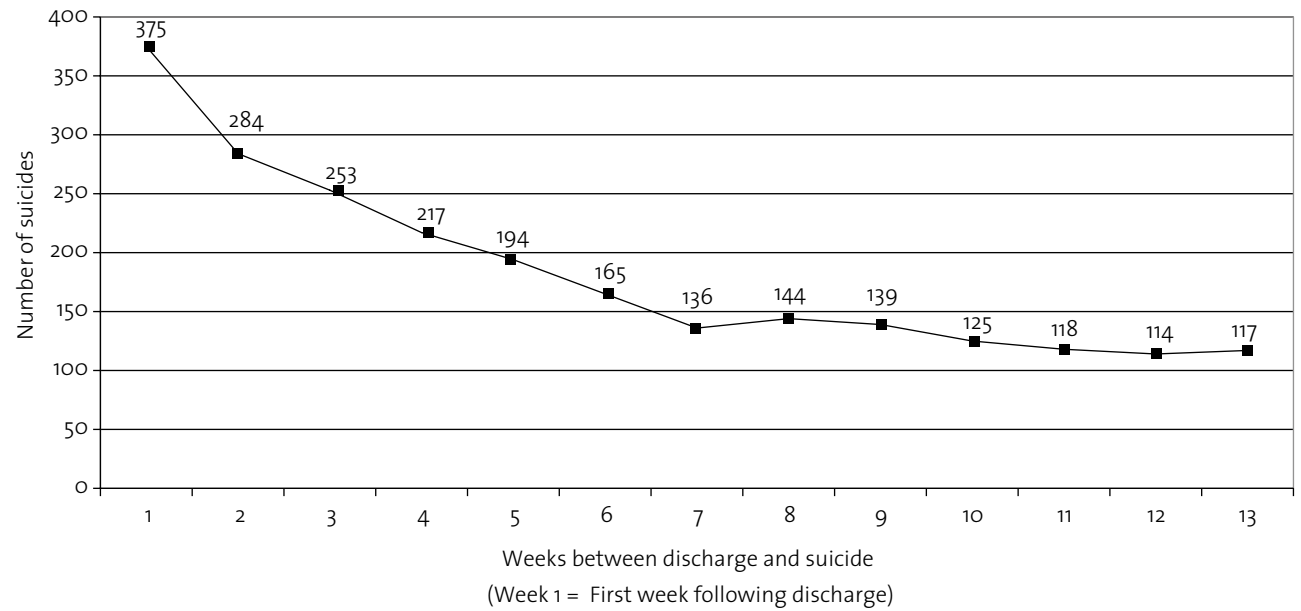




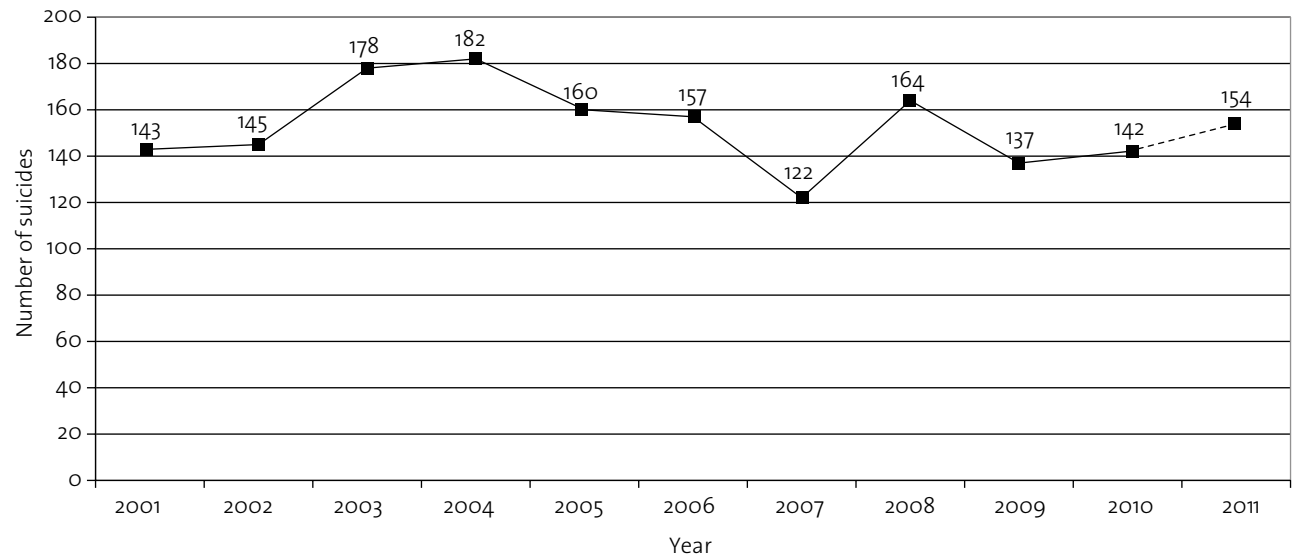
Figure 16: Number of patient suicides per week following discharge (2001-2011)



## Treatment refusal

- There were 1,684 suicides in which the patient was known to have refused drug treatment in the month before death, 14% of the total sample, an average of 153 deaths per year.
- There has been no trend in 2001-2010 in the number or proportion of patient suicides characterised by recent treatment refusal. Numbers appeared to be falling in 2004-2007 but this fall has not been maintained (Figure 17).

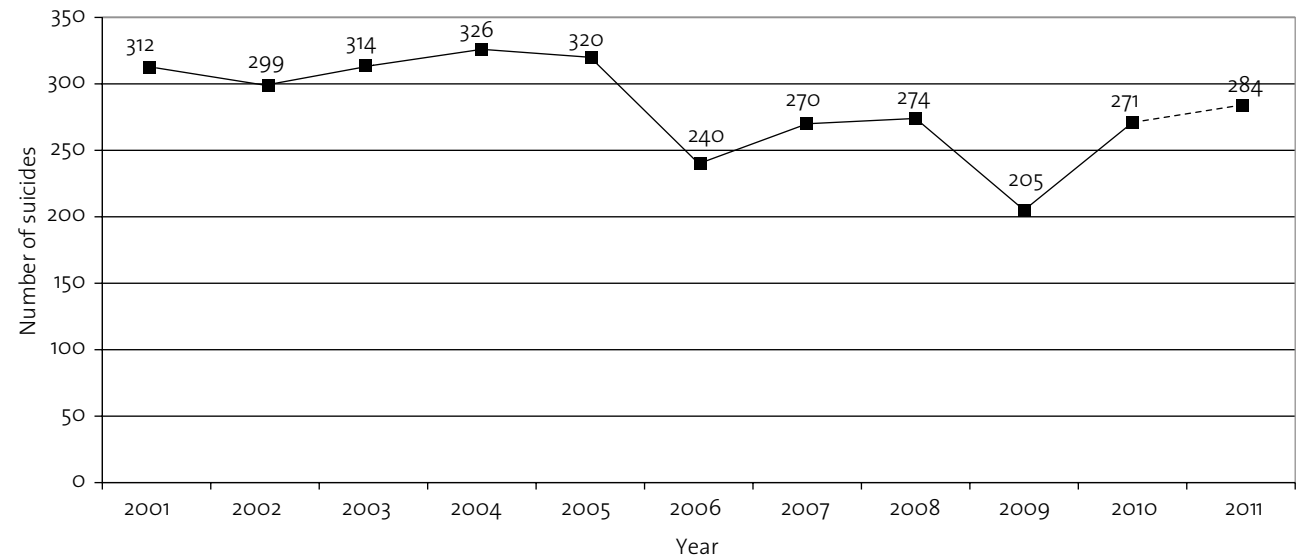
Figure 17: Patient suicide: number of patients who refused drug treatment



## Missed contact

- There were 3,115 suicides by people who missed their final service contact, 26% of the total sample, an average of 283 deaths per year.
- There was an overall fall in 2001-2010 in the number of patient suicides following missed contact, although there has been no continuing fall in 2010 and 2011 (Figure 18).

Figure 18: Patient suicide: number of patients who missed their last appointment with services



## Alcohol and drug misuse

- There were 5,880 suicides in patients with a history of alcohol misuse, 45% of the total sample, an average of 535 deaths per year.
- 4,079 patient suicides had a history of drug misuse, 31% of the total sample, an average of 371 deaths per year.
- There were 7,055 patients who had a history of either alcohol or drug misuse or both, 54% of patient suicides, an average of 641 deaths per year.
- Between 2001 and 2010, the number of patient suicides with a history of alcohol or drug misuse did not change, although we project a rise in 2011 (Figure 19).
- 1,115 (8%) patient suicides had a primary diagnosis of alcohol dependence/misuse; 543 (4%) had drug dependence/misuse. The number with alcohol or drug dependence/misuse did not change over the report period.
- 1,970 (15%) patient suicides had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis), an average of 179 deaths per year. There was no trend during the report period overall (Figure 20) but numbers have fallen since a peak in 2004.

Figure 19: Patient suicide: number with a history of alcohol or drug misuse

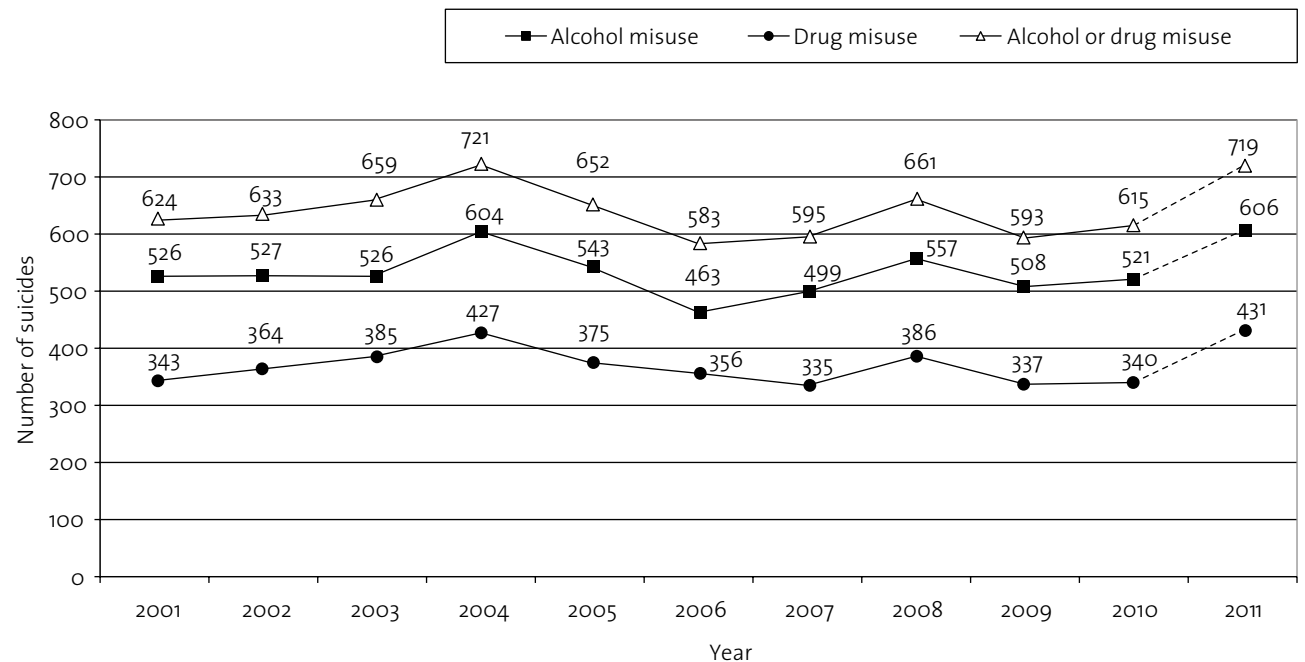
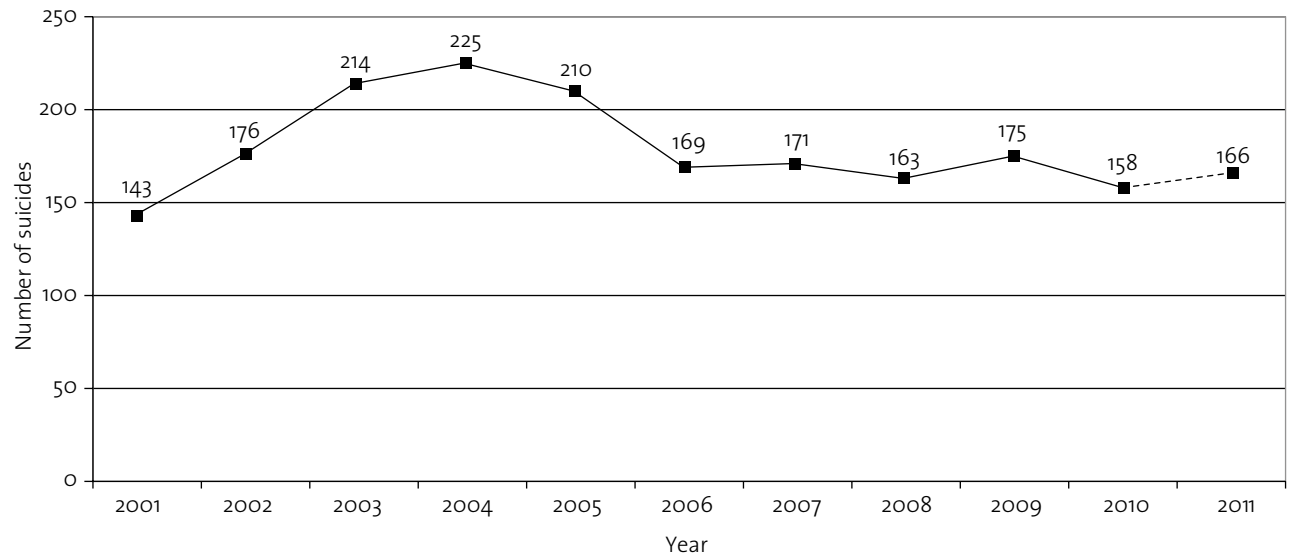


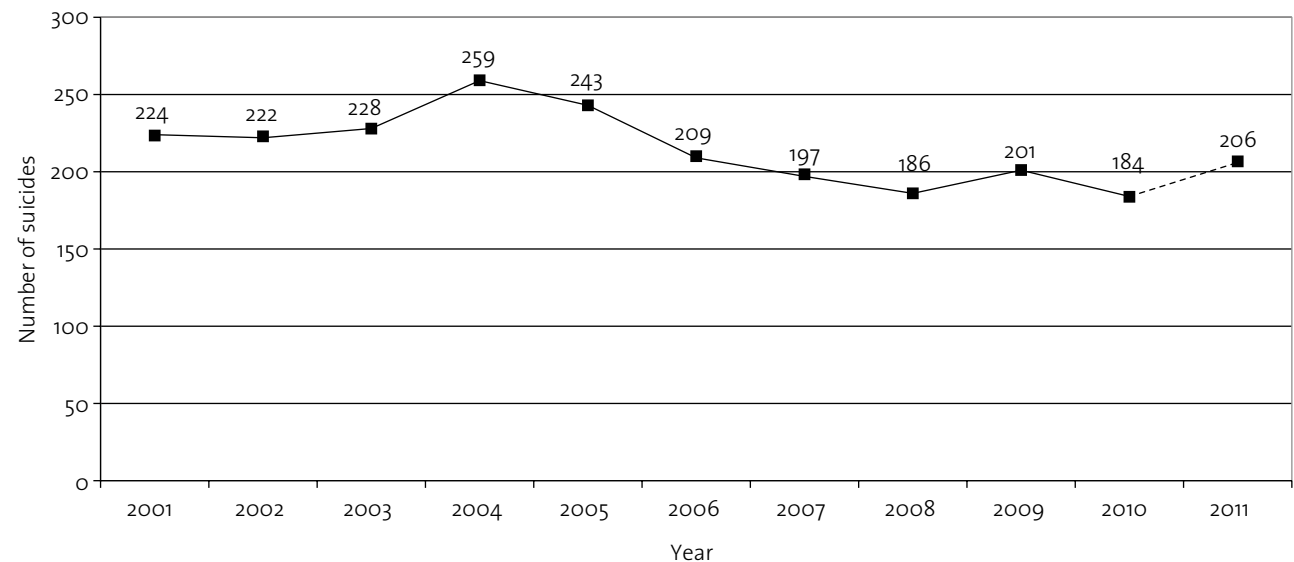
Figure 20: Patient suicide: number with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)



## Patients with schizophrenia

- There were 2,359 suicides by patients with a primary diagnosis of schizophrenia, 18% of the total sample, an average of 214 deaths per year.
- There was an overall fall in the number of suicides by patients with schizophrenia between 2001 and 2010 (Figure 21). In 2001-2005, the annual average number was 235 while in 2006-2010 it was 195.
- We are projecting an increase in suicides by patients with schizophrenia in 2011, consistent with the increase in patients overall (Table 2).
- 530 patients with schizophrenia had refused drug treatment in the month before death, 23% of the sample (excluding unknowns), an average of 48 deaths per year.
- 511 (27% excluding unknowns) had missed their last appointment with services, an average of 46 deaths per year.

Figure 21: Patient suicide: number of patients with a primary diagnosis of schizophrenia



## 1.2 HOMICIDE

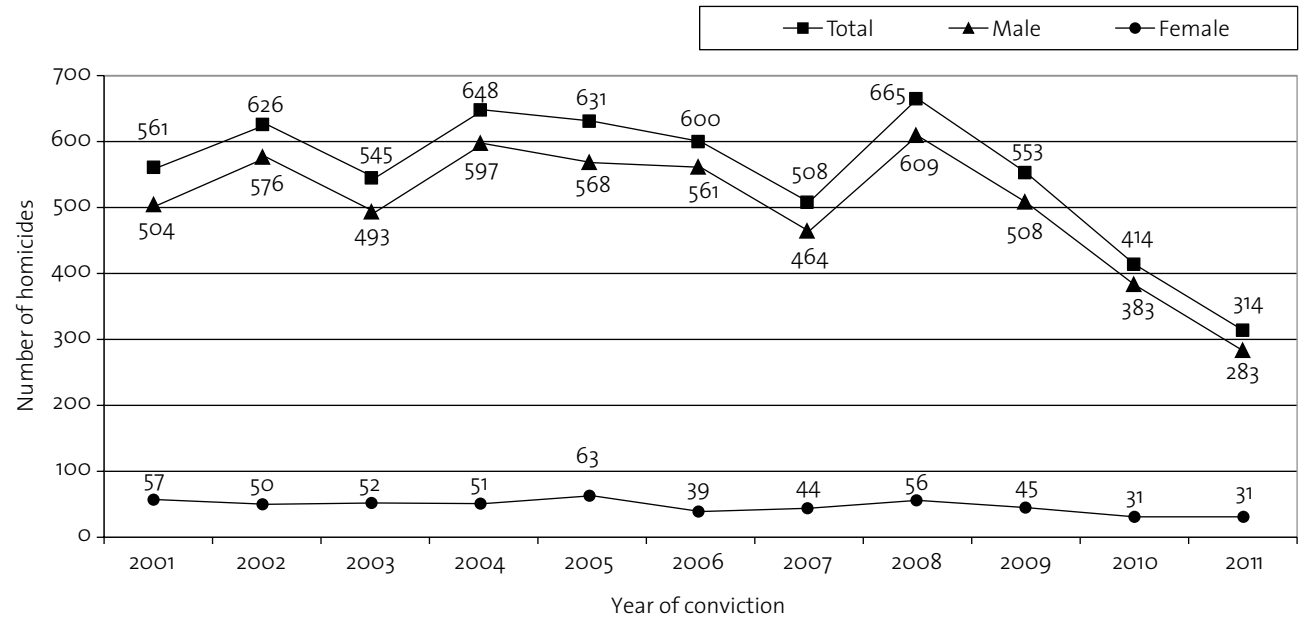
The Inquiry was notified by Home Office Statistics of 6,065 homicide convictions in the report period, 2001-2011. A psychiatric report was obtained on 1,930 (32%) homicide perpetrators.

### 1.2.1 Homicide in the general population

- The annual number of convictions in the general population is shown in Figure 22. These figures are provided as context for our data on homicides by people with mental illness. More recent statistics are published (for England and Wales) by the Office for National Statistics.<sup>3</sup>
- There has been a decrease in the number of people convicted of homicide over the report period from a peak in 2008 (Figure 22).
- The apparent fall in homicide convictions is large and may have three components: (1) a true fall in homicide; (2) delays in the legal process; (3) delays in data notification following conviction. We are not aware of any fall in the rate of conviction.
- A recent fall in homicide incidents has been reported by the Office for National Statistics.<sup>3</sup> However, the fall in convictions in 2011 is likely to be explained in part by delays in the legal process and/or in data notification. The figures for 2011 are likely to be incomplete to an unknown degree and trends in this report have excluded 2011 for this reason.
- The most common method was the use of a sharp instrument (40% of the total sample).



Figure 22: Number of homicide convictions in the general population, by gender of perpetrator





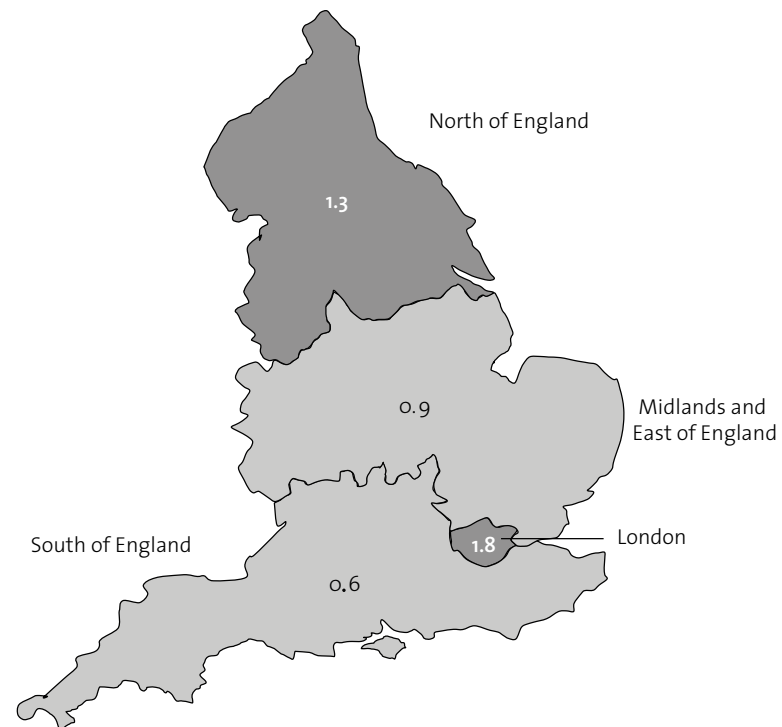
## Relationship to victim of perpetrator

- The relationship of victim to perpetrator was: acquaintance (2,006, 41%); stranger (1,282, 26%); spouse/partner (including ex spouse/partner) (959, 20%); and other family member (634, 13%).
- There has been a fall in the number and proportion of victims who were family members and spouse/partners (including ex spouse/partners) over the report period.
- There has been an increase in the proportion of stranger homicides, but not in the number.

## Variation in homicide by NHS region

- There was some variation in homicide conviction rates by NHS region of residence (2008-2010). The highest rate was in London and the lowest in the South of England region (Figure 23).

Figure 23: Rate of perpetrators convicted of homicide per 100,000 population by NHS region of residence (average rate 2008-2010)

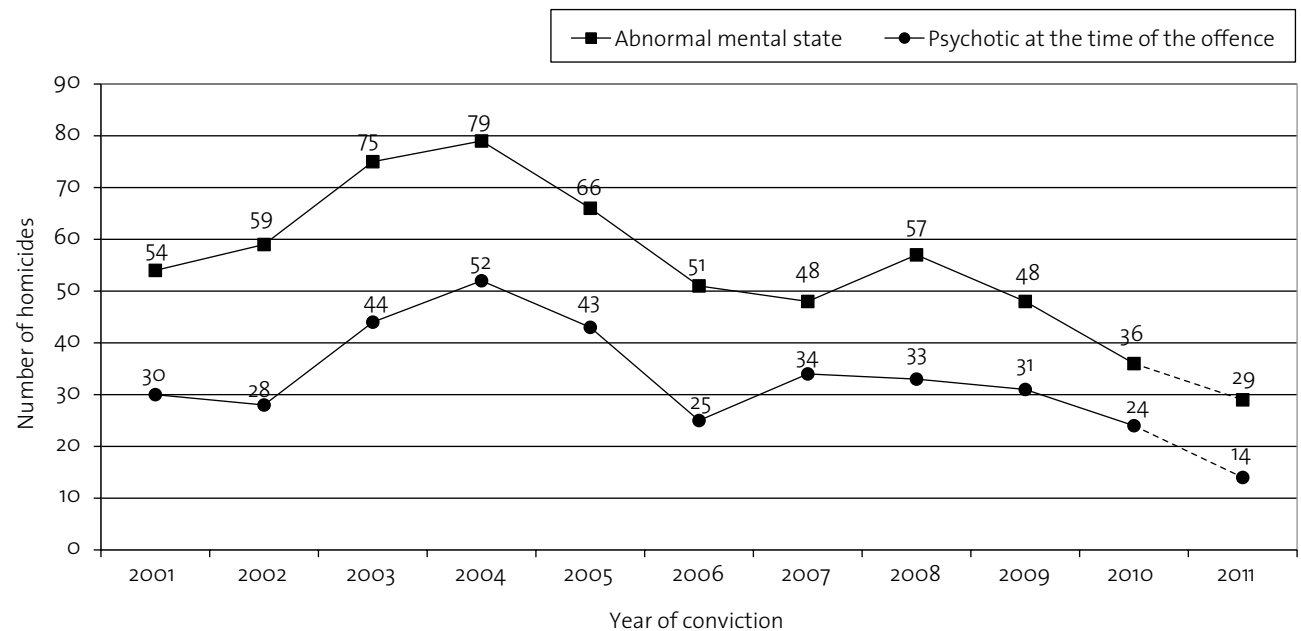


## 1.2.2 Homicide by mentally ill people in the general population

### Perpetrators who had symptoms of mental illness at the time of the homicide

- The number of people during the report period with an abnormal mental state at the time of the homicide was 602, 10% of the total sample, an average of 55 per year.
- 358 were psychotic at the time of the offence, 6% of the total sample, an average of 33 per year.
- There has been a fall in homicide by people with mental illness, including people with psychosis; this follows a rise in the years up to 2004 (Figure 24).
- Although the figures for 2011 and, to a lesser extent, 2010 are incomplete, the fall since 2004 is large and can not be explained by legal or data delays.

Figure 24: Perpetrators with symptoms of mental illness at the time of the homicide



### 1.2.3 Patient homicide

- During 2001-2011, 615 people convicted of homicide (10% of the total sample) were identified as patients, i.e. the person had been in contact with mental health services in the 12 months prior to the offence, an average of 56 homicides per year.
- The number of patient homicides has fallen since a peak in 2006, especially in 2009-2010. Numbers rose in the years up to 2006. The number of homicides in 2010 was the lowest recorded over the report period, although an increase was projected for 2011.
- The lower patient homicide figures in 2009-2010 are more pronounced in men, figures for females being already low (Figure 25), and are found across the age range (Figure 26).
- One homicide was committed by a patient subject to a community treatment order (CTO); another 1 by a patient who had previously been on a CTO.

Figure 25: Number of patient homicides, by gender of perpetrator

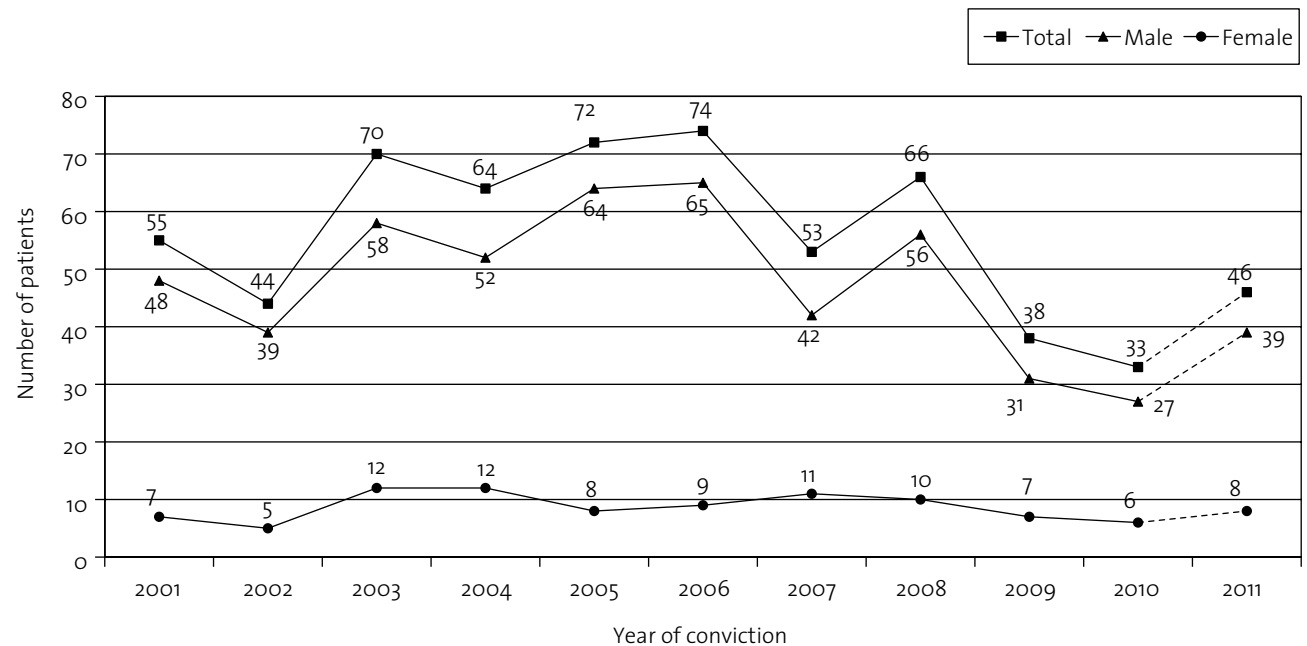
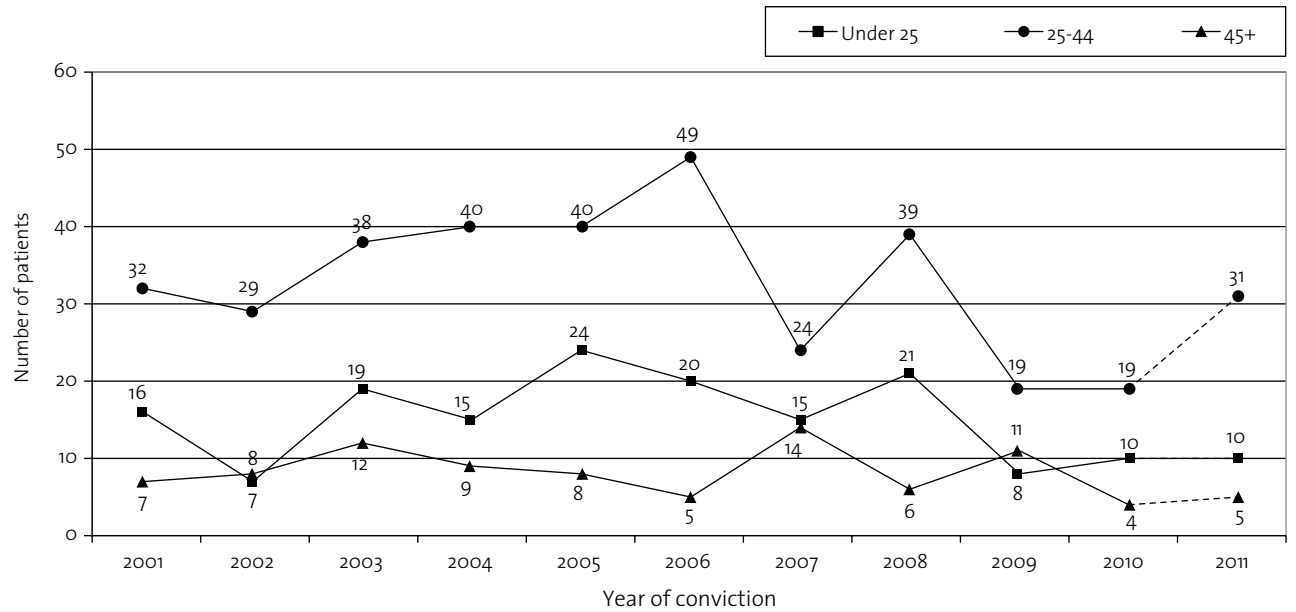


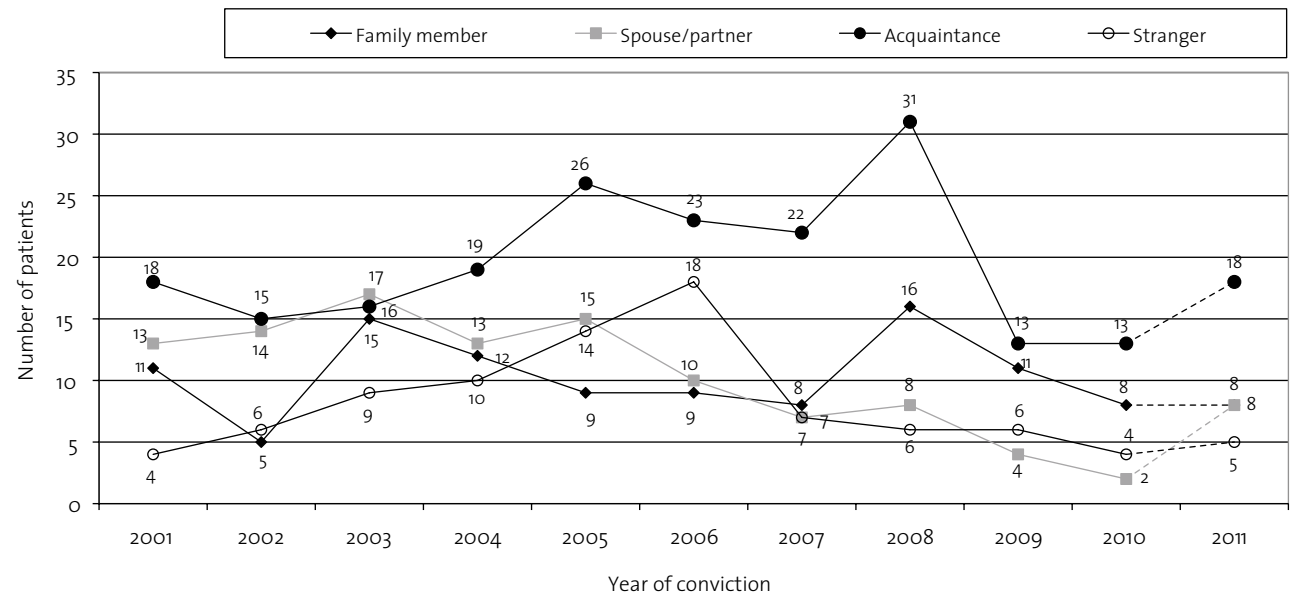
Figure 26: Number of patient homicides, by age-group of perpetrator



## Relationship of victim to perpetrator

- The relationship of victim to perpetrator was: acquaintance (214, 41%); family member (112, 21%); spouse/partner (including ex spouse/partner) (111, 21%); and stranger (89, 17%) (Figure 27).
- For male patients, the relationship of victim to perpetrator was: acquaintance (188, 44%); family member (79, 18%); spouse/partner (including ex spouse/partner) (84, 19%); and stranger (84, 19%).
- For female patients, the relationship of victim to perpetrator was: family member (33, 37%); spouse/partner (including ex spouse/partner) (27, 30%); acquaintance (26, 29%); and stranger (5, 6%).
- There were 89 (17%) stranger homicides, an average of 8 per year. The number of stranger homicides has fallen since a peak in 2006, having risen in the previous years.
- There were 79 (13%) homicides in which a male patient killed a female spouse, an average of 7 per year.

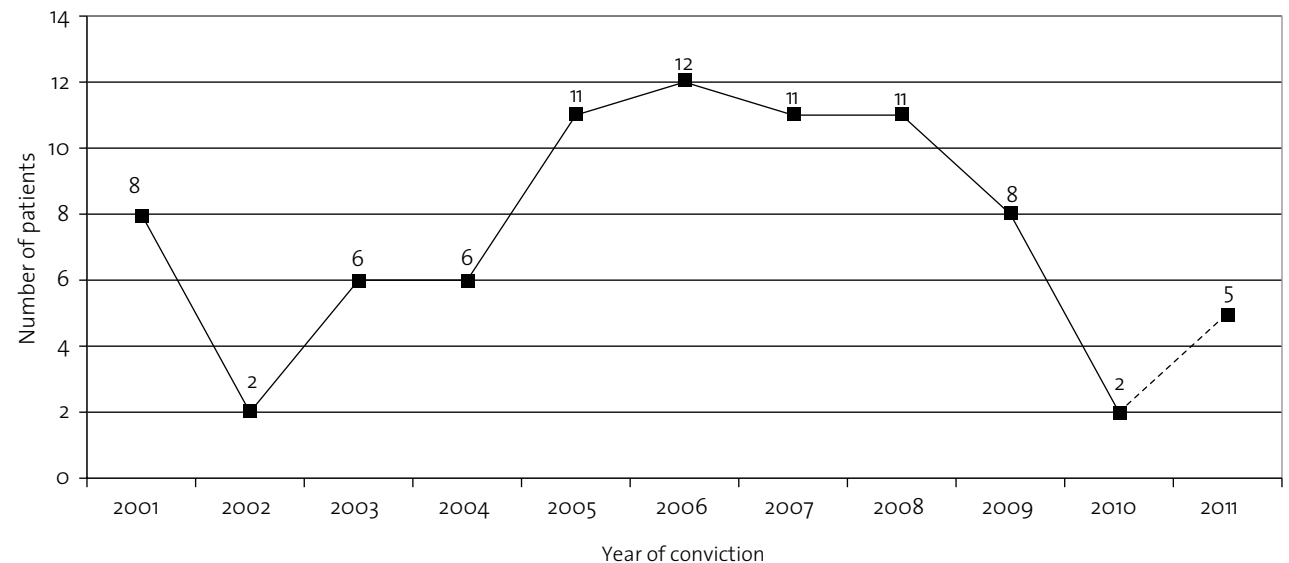
Figure 27: Patient homicide: relationship of victim to perpetrator



## Treatment refusal

- There were 82 patients (16%) known to have refused drug treatment in the month before the homicide, an average of 7 per year.
- The numbers have been lower in 2009-2011, having risen in the period leading up to 2006 (Figure 28).
- In 2009-2011, treatment refusal was reported in 14% of patient homicides compared to 20% in 2006-2008. However, this difference does not reach statistical significance.

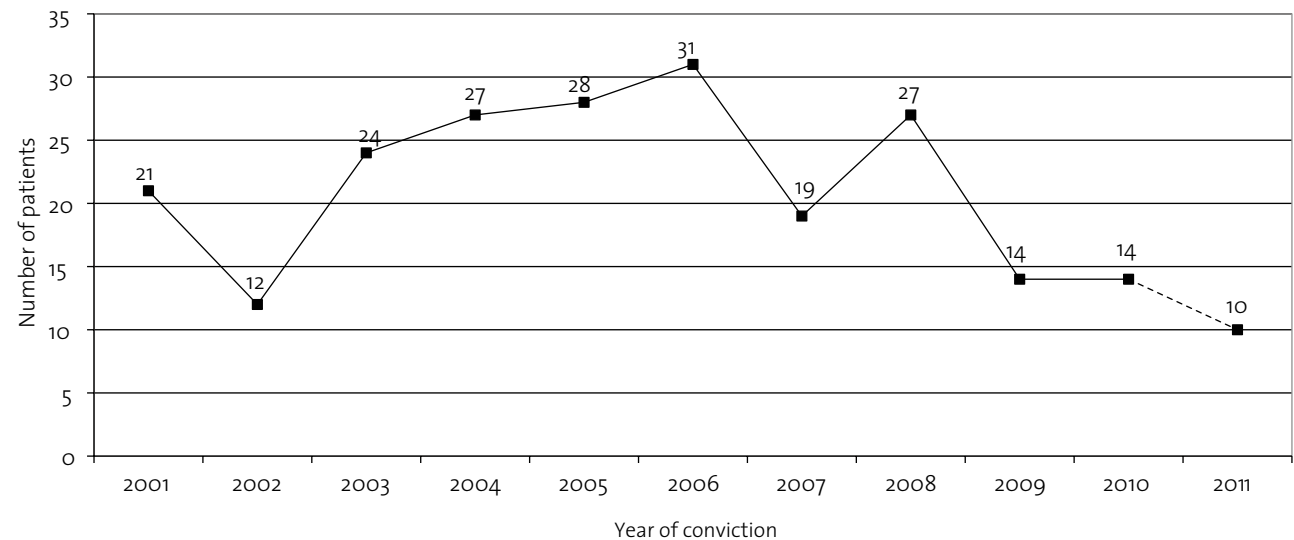
Figure 28: Patient homicide: number of patients who refused drug treatment



## Missed contact

- There were 227 patients (40%) who missed their last appointment with services before the homicide occurred, an average of 21 per year.
- The numbers have been lower in 2009-2011, having risen in the years up to 2006 (Figure 29).
- In 2009-2011, missed final contact was reported in 35% of patient homicides, compared to 43% in 2006-2008. However, this difference does not reach statistical significance.

Figure 29: Patient homicide: number of patients who missed their last appointment with services



## Crisis Resolution/Home Treatment

- 20 patients were under crisis resolution/home treatment teams (CR/HT) at the time of the homicide, 4% of the patient sample, an average of 2 per year, ranging between 0 and 6.
- 16 of these 20 occurred in the years 2005-2009. There has been 1 homicide by a patient under CR/HT notified to us in 2010-2011.

## Alcohol and drug misuse

- There were 414 patients with a history of alcohol misuse, 74% of the patient sample, an average of 38 per year.
- 435 patients had a history of drug misuse, 76% of the patient sample, an average of 40 per year.
- There were 527 patients who had a history of either alcohol or drug misuse or both, 90% of patients, an average of 48 homicides per year.
- Between 2001 and 2010, there was a fall in the number of patients with a history of alcohol misuse. Whilst the number with drug misuse did not change overall, there has been a fall since a peak in 2006 (Figure 30).

- 72 (12%) patients had a primary diagnosis of alcohol dependence/misuse; 82 (14%) had drug dependence/misuse. The number with alcohol or drug dependence/misuse did not change over the report period.
- 144 (24%) patients had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis), an average of 13 per year. The number with dual diagnosis has fallen since a peak in 2005 but we predict an increase in 2011 (Figure 31).





Figure 30: Patient homicide: number with a history of alcohol or drug misuse

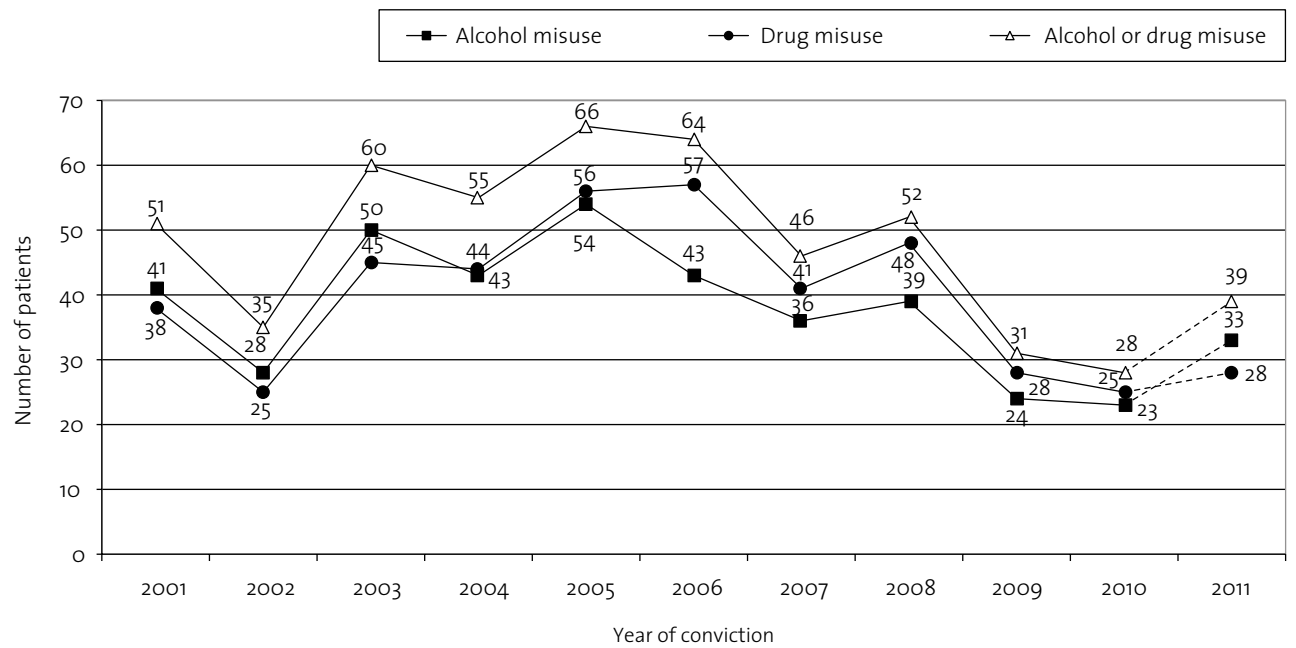
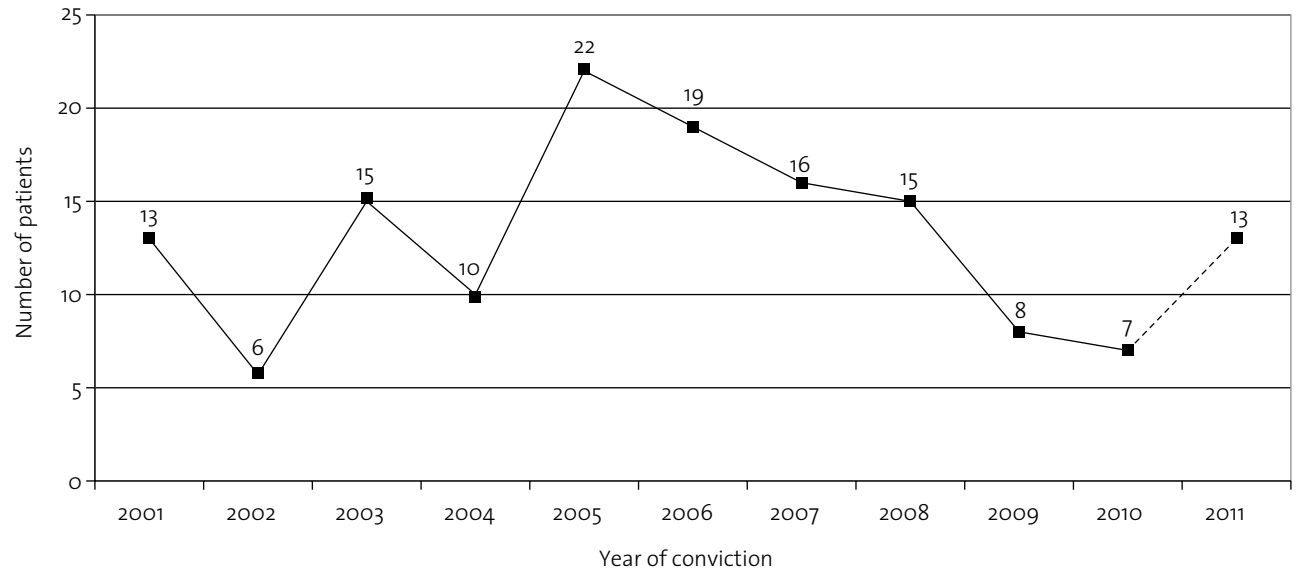


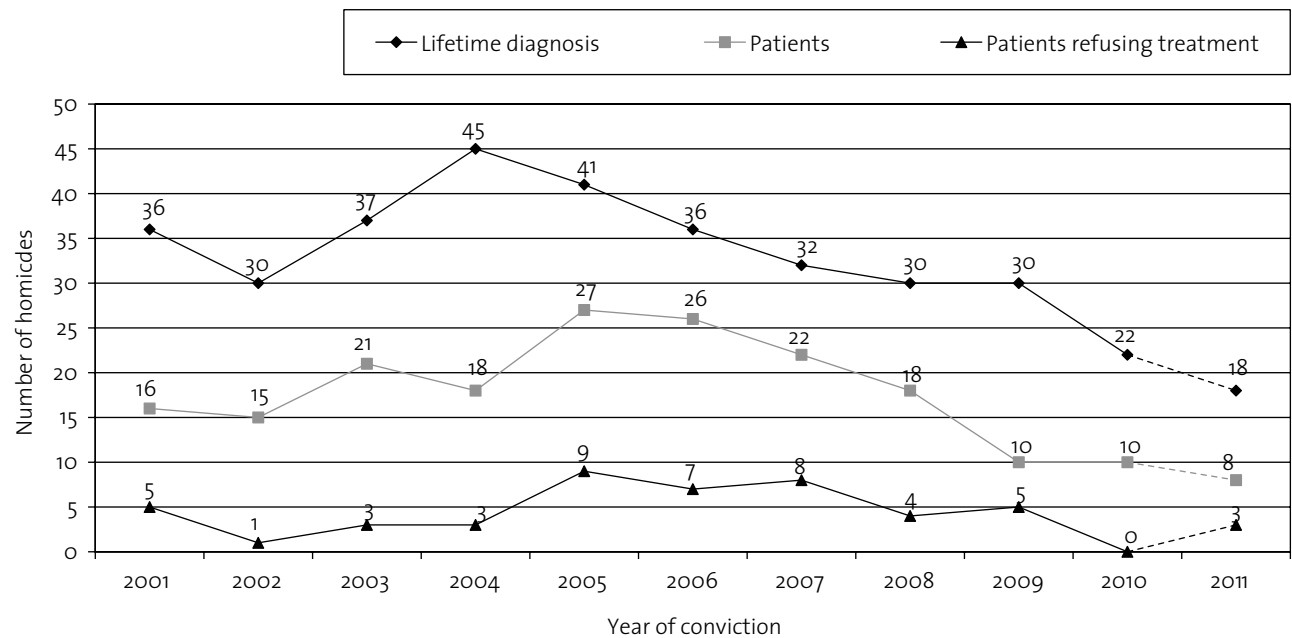
Figure 31: Patient homicide: number with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)



## Homicide and schizophrenia

- There were 357 homicides by people with schizophrenia (based on lifetime history) over 2001-2011, 6% of the total sample, an average of 32 per year.
- There has been a decrease in the number of homicides by people with schizophrenia since 2004 (Figure 32).
- 191 (54%) were patients, an average of 17 per year (Figure 32).
- The figures for homicide by patients with schizophrenia in 2009-2011 are the lowest in the report period and the lowest since data collection began in 1997.
- 48 (28%) patients with schizophrenia had refused drug treatment in the month before the homicide.
- 68 (40%) patients with schizophrenia missed their last appointment with services before the homicide occurred, an average of 6 per year, with a peak of 13 in 2006.

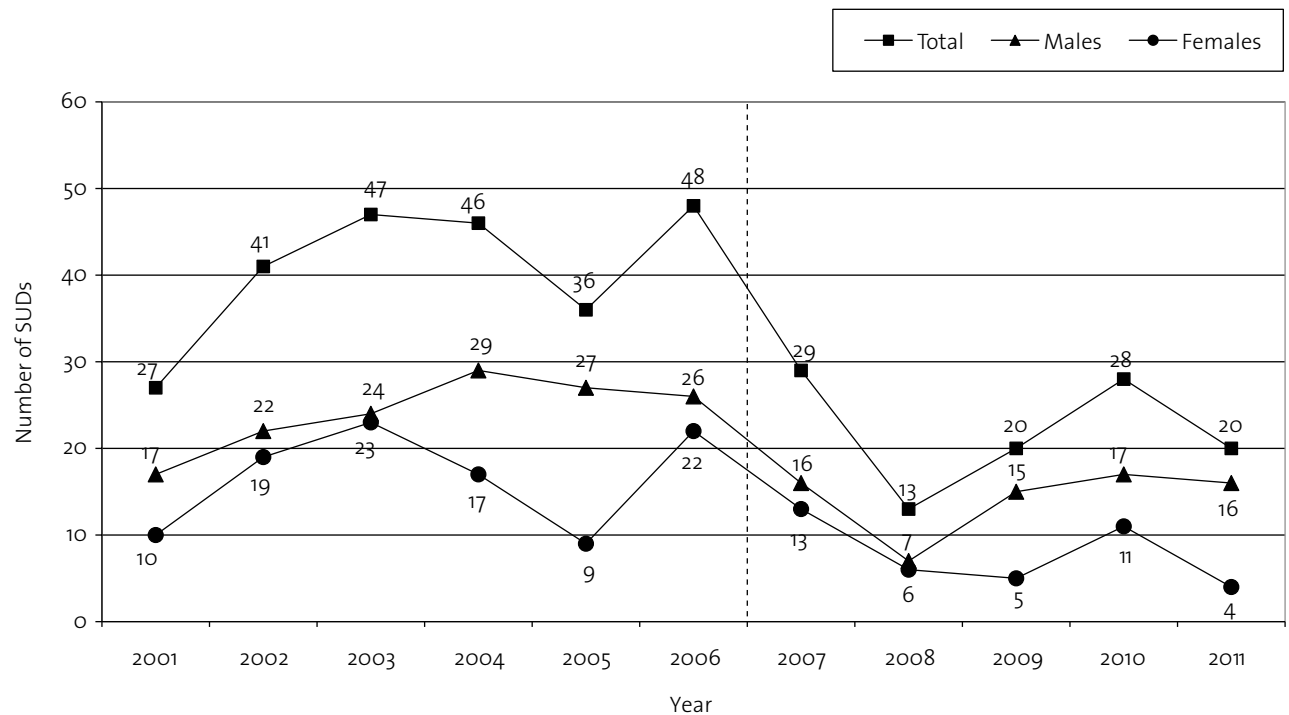
Figure 32: Perpetrators with a primary diagnosis of schizophrenia



### 1.3 SUDDEN UNEXPLAINED DEATH IN MENTAL HEALTH IN-PATIENTS (SUD)

- There were 355 SUD cases over the report period, an average of 32 per year (Figure 33).
- There was an overall fall in the number of SUD cases over the report period. However, due to a change in data provider, recent numbers are not strictly comparable with historical data.
- 162 (50%) had a history of cardiovascular disease; 82 (26%) had a history of respiratory disease; 48 (15%) had a history of cerebrovascular disease, and 29 (9%) had a history of epilepsy.
- 27 (8%) were receiving 2 or more antipsychotic drugs (i.e. polypharmacy).
- No SUD cases were receiving antipsychotic drug doses above British National Formulary (BNF) limits.
- There were 5 deaths within 1 hour of restraint over the report period.

Figure 33: Number of sudden unexplained deaths, by gender



Note: between 2006 and 2007 data providers changed from the NHS-Wide Clearing Service (NWCS) to Hospital Episode Statistics (HES), therefore the numbers before and after 2006 are not strictly comparable.



## Patient ethnicity

- There were 45 SUD cases in patients from black and minority ethnic (BME) groups over the report period. The number of these deaths varied from 1-8 per year, and showed no clear pattern over time.
- There were 18 deaths within 24 hours of restraint between 2002 and 2011. The number ranged from 0-4 per year. Six of these post-restraint deaths were from a BME group. We do not know whether restraint caused these deaths.
- The number of post-restraint deaths is too small to identify a trend. In the last 5 years of data collection (2007-2011) there were 11 deaths within 24 hours, of which 4 were in BME patients.

## Patients aged under 45

- There were 91 (26%) cases of SUD in patients under 45 years. There was no trend in these cases over the report period.
- Those aged under 45 were more likely to be male than older SUD cases (64 cases, 70% v. 152 cases, 58%) and more likely to be from a BME group (24 cases, 26% v. 21 cases, 8%).
- 18 (23%) had a history of cardiovascular disease; 15 (19%) had a history of respiratory disease and 9 (11%) had a history of epilepsy. There were no SUD cases aged under 45 with a history of cerebrovascular disease.
- 16 (20%) patients were receiving 2 or more antipsychotic drugs (i.e. polypharmacy).



## 2. NORTHERN IRELAND

### 2.1 SUICIDE

Between 2001-2011, the Inquiry was notified of 2,511 deaths in the general population that received a suicide or undetermined verdict. These are referred to as suicides throughout the report.

#### 2.1.1 Suicide in the general population

- There was an overall increase in the number and rate of suicides over the 10-year period, although a fall is predicted in 2011 (Table 3; Figure 34).
- Our figure for 2010 has increased by 6% since it was estimated in last year's report. If this year's estimate for 2011 increases by the same percentage, it will reach 245, lower than in 2010 but in keeping with higher figures in recent years.

- The increase in 2001-2010 was observed in males and females overall (Figure 34). The increase was specifically found in men aged under 25, 35-44 and 45-64, and in women aged 35-44 (Figures 35 and 36).

**Table 3: Number of suicides in the general population, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	139	159	123	175	180	173	195	203	172	226	175
Female	41	45	41	62	50	53	66	55	58	64	56
Total	180	204	164	237	230	226	261	258	230	290	231



Figure 34: Rates of suicide in the general population, by gender

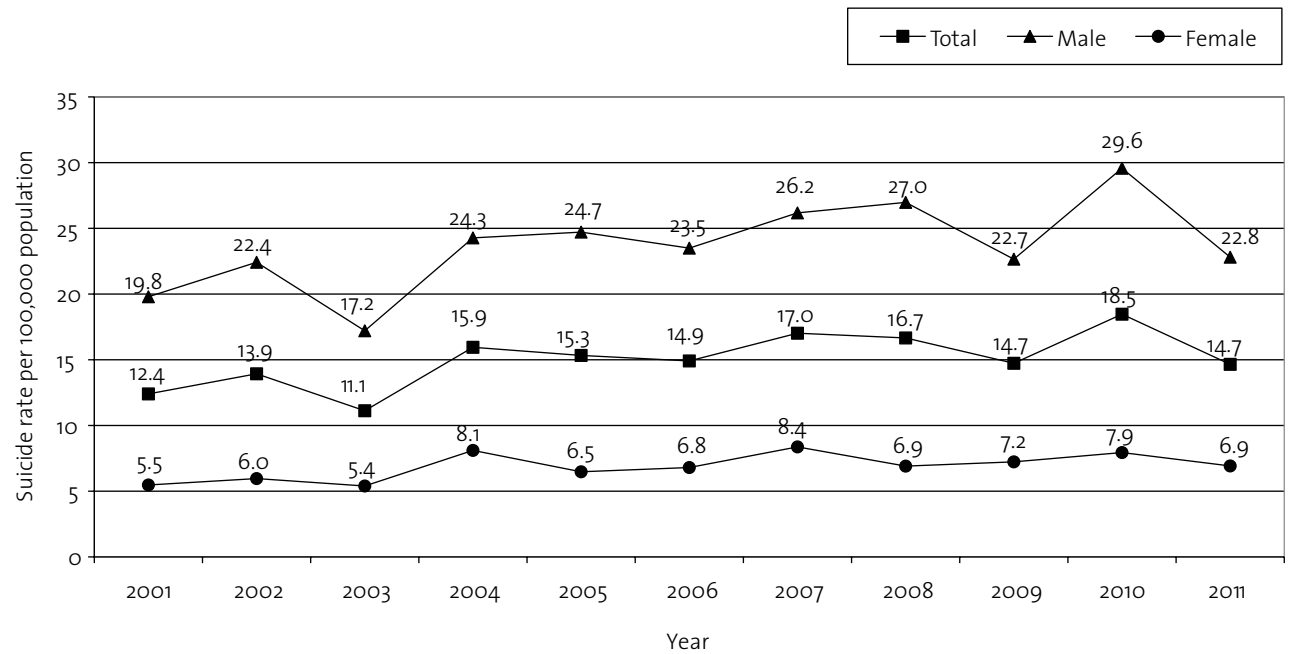


Figure 35: Rates of male suicide in the general population, by age-group

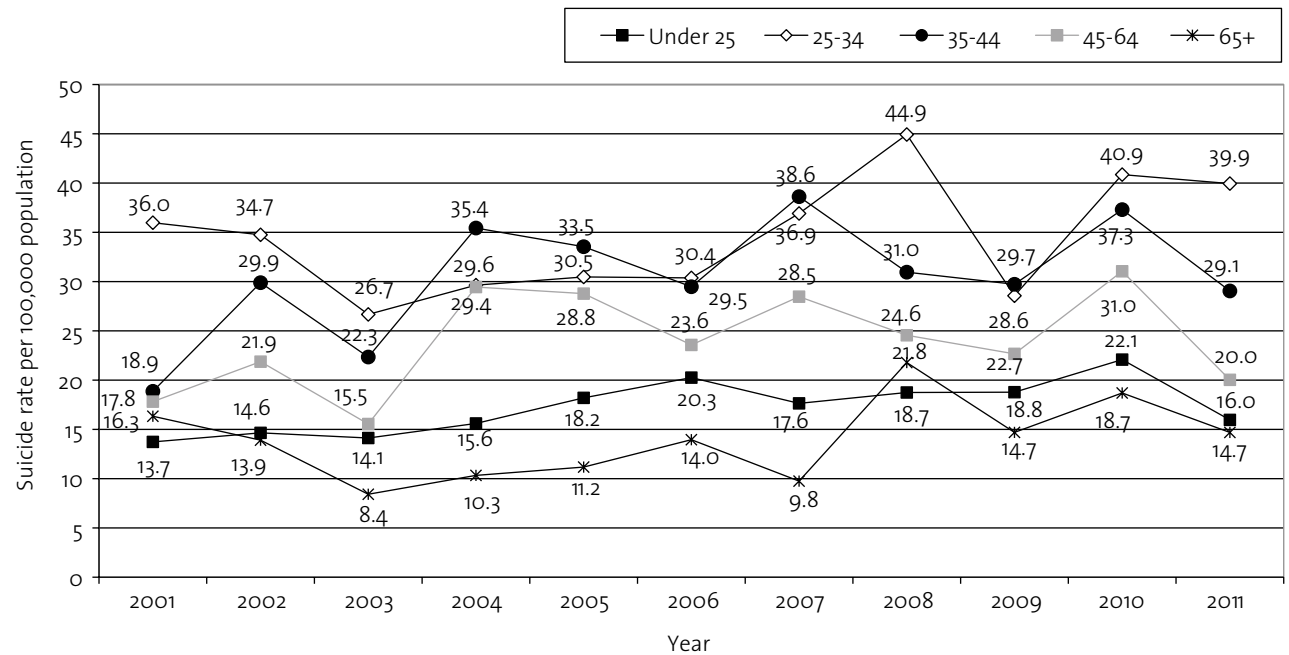
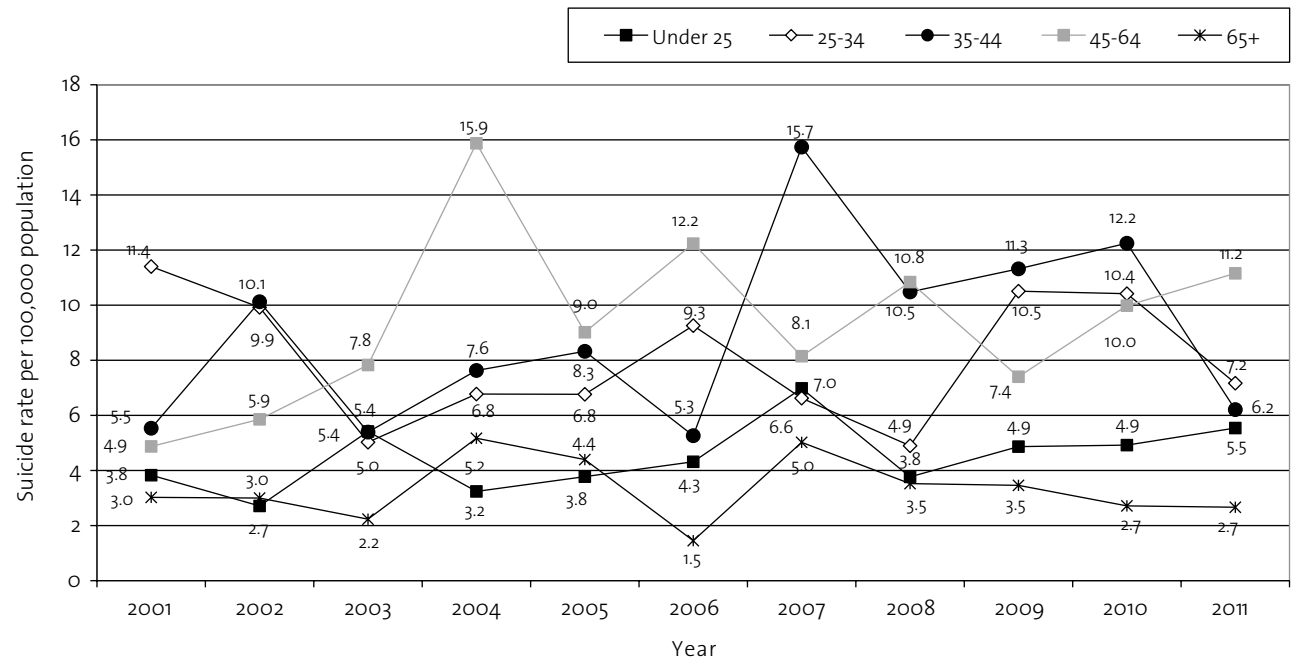




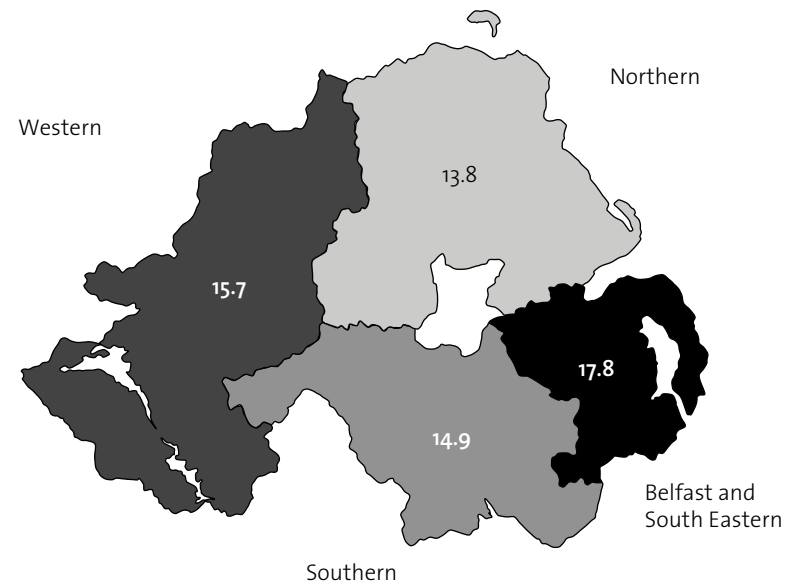
Figure 36: Rates of female suicide in the general population, by age-group



## Variation in suicide by region

- There was some variation in suicide rates by region (as determined by the Health and Social Care Trust of residence) at the time of death (2009-2011). The highest rate of suicide was in the Eastern Area, at 17.8 per 100,000 population, and the lowest in the Northern Area at 13.8 per 100,000 population (Figure 37).

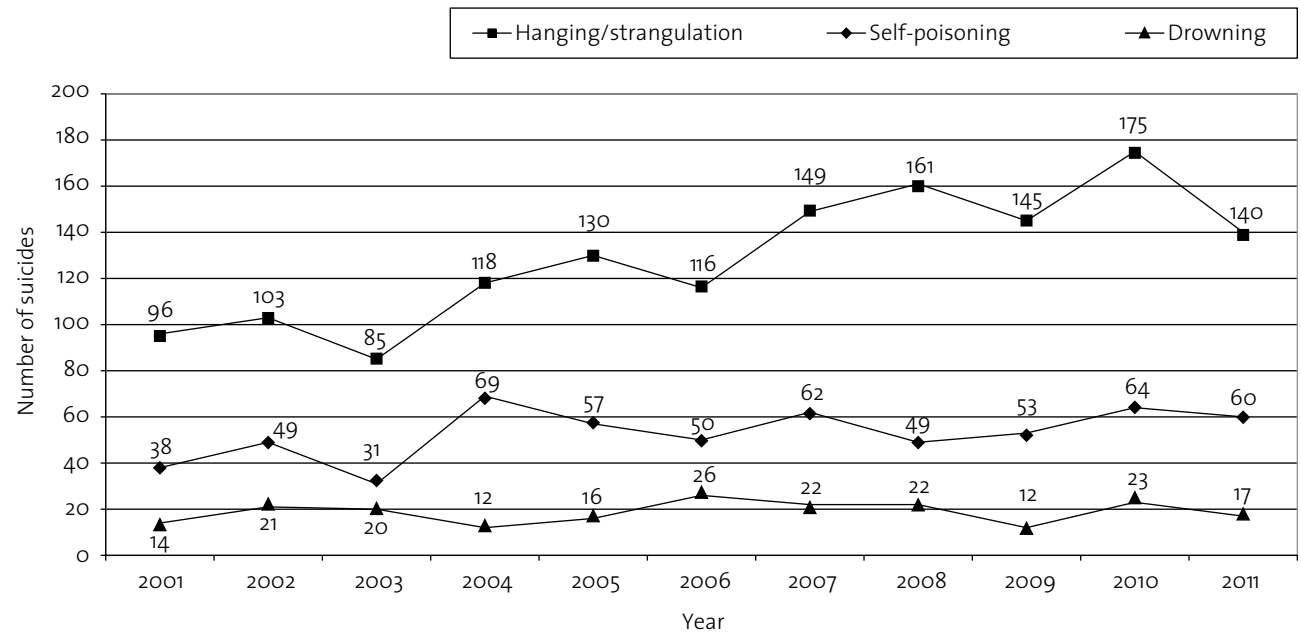
Figure 37: Rate of suicide per 100,000 population, by Health and Social Care Trust of residence (average rate 2009-2011)



## Method of suicide

- The most common methods of suicide were hanging/strangulation (56%), self-poisoning (overdose) (23%), and drowning (8%). Less frequent methods were firearms (4%), carbon monoxide (CO) poisoning (2%), jumping/multiple injuries (mainly jumping from a height or being struck by a train) (2%), and cutting/stabbing (1%).
- Between 2001 and 2010 deaths by hanging and self-poisoning increased (Figure 38). However, hanging rose steadily to 2010 whilst self-poisoning reached a peak in 2004 and subsequently fluctuated.

Figure 38: Suicide in the general population: main causes of death



## 2.1.2 Patient suicide

### Patient suicide: numbers and rates

- During 2001-2011, 713 suicides (28% of general population suicides) were identified as patient suicides, i.e. the person had been in contact with mental health services in the 12 months prior to death. This represented an average of 65 patient suicides per year.

- Despite the large increase in suicides in the general population, there was no overall change between 2001 and 2010 in the number or rate of suicide (using a general population denominator) (Table 4; Figure 39).
- The number of patient suicides increased in those aged 45-64 over the period 2001-2010 (Figure 40).

- 6 (1%) patient suicides were aged under 18.
- In 2008-2010, a higher proportion of patients were unemployed (47%) compared to 2001-2003 (36%).

**Table 4: Number of patient suicides, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Male	40	49	33	47	49	43	49	50	42	46	49
Female	17	17	12	26	15	17	27	25	21	20	19
Total	57	66	45	73	64	60	76	75	63	66	68

\* projected figure



Figure 39: Rates of patient suicide, by gender

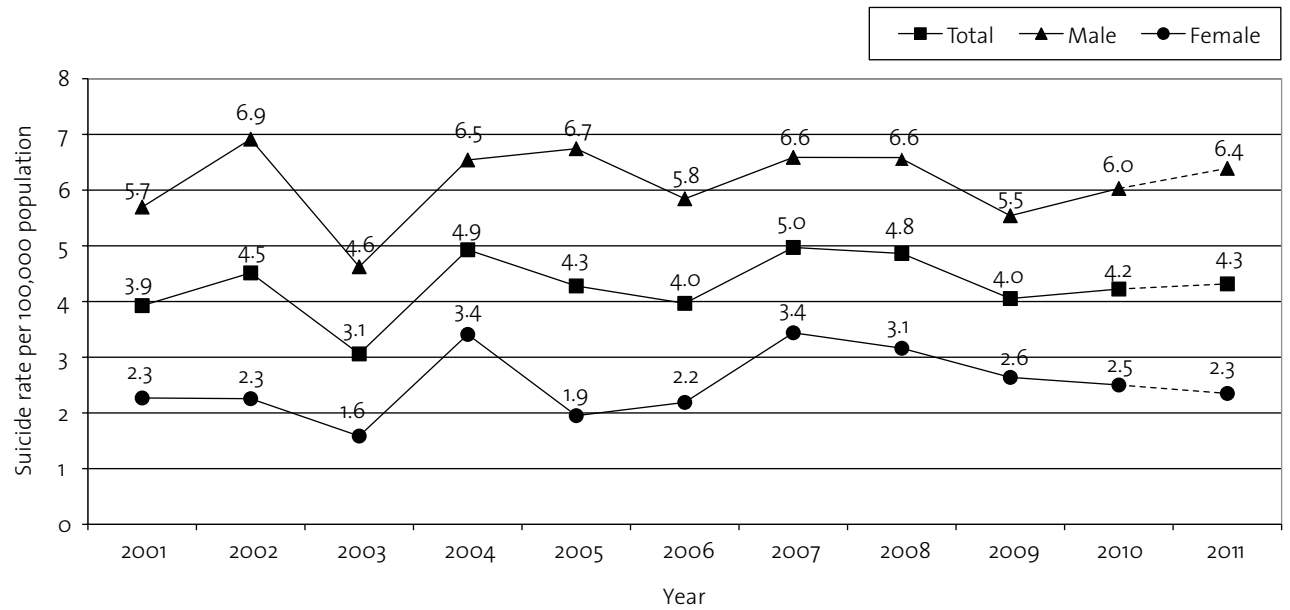
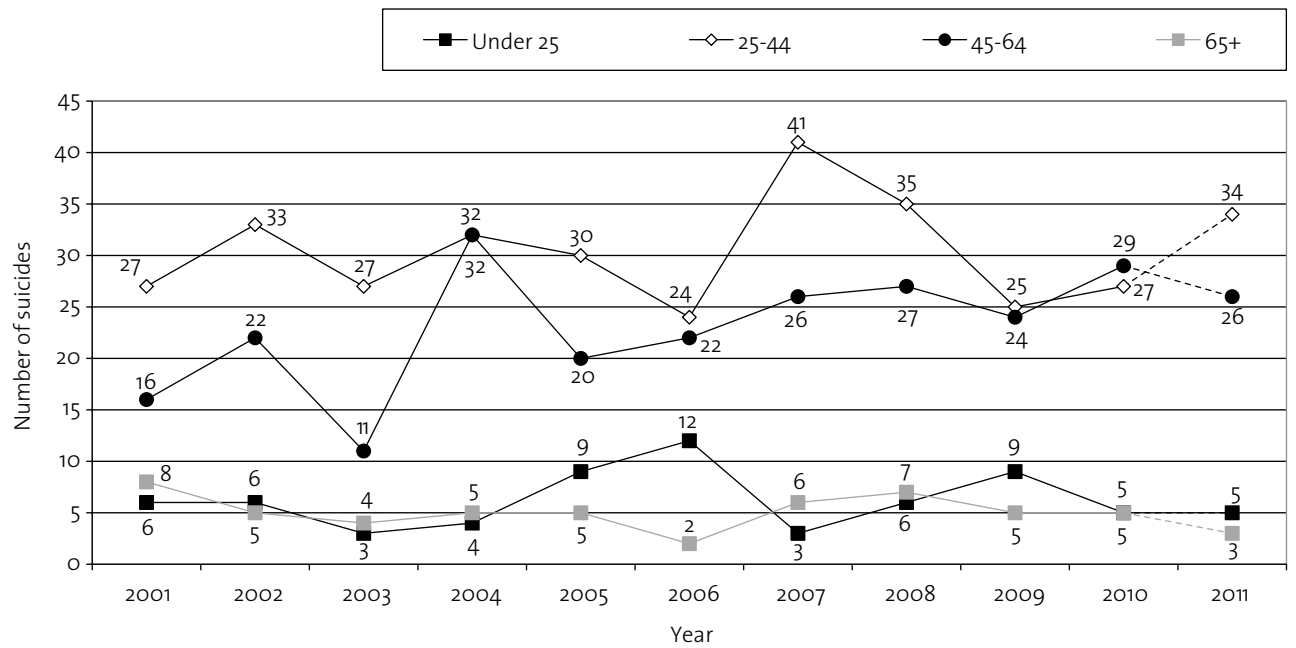


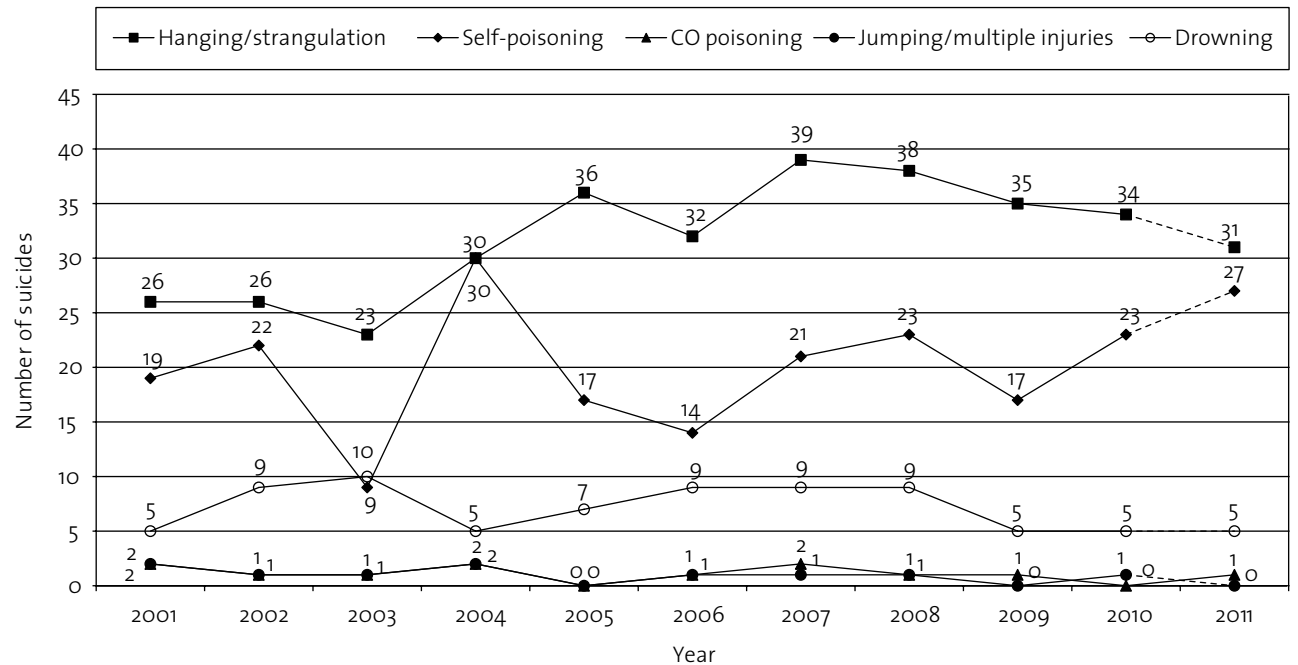
Figure 40: Number of patient suicides, by age-group



## Method of suicide by patients

- The most common methods of suicide by patients were hanging/strangulation (49%), self-poisoning (31%), and drowning (11%).
- Deaths by hanging increased overall between 2001 and 2010, although the peak year was 2007 (Figure 41). Figures for other methods did not change. However, our projections for 2011 suggest that figures for hanging and self-poisoning will become closer.
- No patient suicide by firearms has been reported to us since 2005.
- The most common substances used in self-poisoning were opiates (24%), anti-psychotic drugs (12%), benzodiazepines/hypnotics (11%), and paracetamol/opiate compounds (9%). There were no trends in substances used in deaths by self-poisoning over the report period.

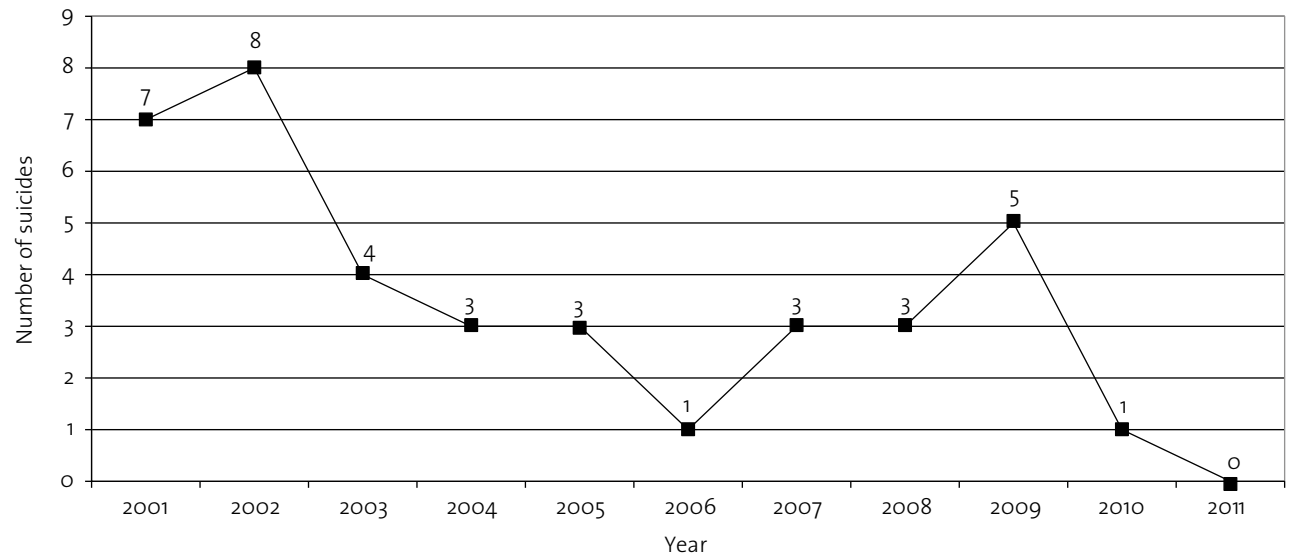
Figure 41: Patient suicide: cause of death



## In-patient suicide

- There were 38 in-patient suicides during 2001-2011, 5% of patient suicides, an average of 3 deaths per year.
- The number of in-patient suicides peaked in 2002, after which there was a steady fall, with a smaller peak in 2009. No in-patient suicides were reported to us in 2011 (Figure 42).
- 6 patients died on the ward by hanging over the report period; this number fluctuated from 0 to 2 per year.
- 7 (18%) detained in-patients died by suicide over the report period.
- There were 13 in-patients who died after absconding from the ward, 34% of all in-patient suicides, an average of 1 death per year.

Figure 42: Patient suicide: number of mental health in-patients





## Crisis Resolution/Home Treatment

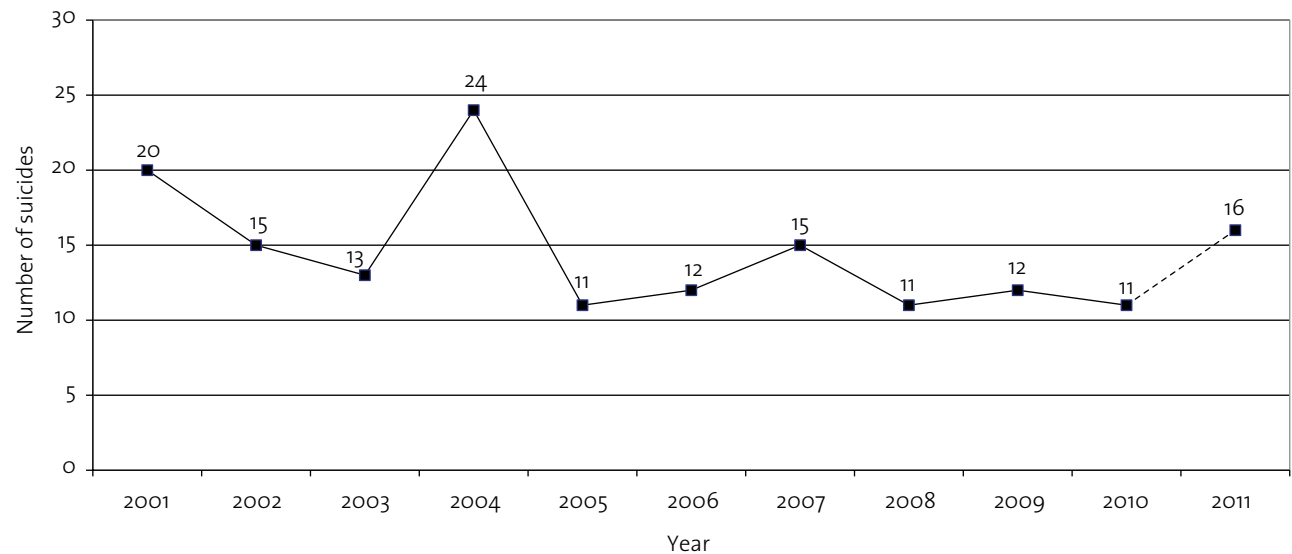
- There were 33 suicides in patients under crisis resolution/home treatment teams (CR/HT), 5% of the total sample, an average of 3 deaths per year.
- From 2005 there have been 24 suicides in patients under CR/HT, compared to 16 in in-patient care.
- There was no overall trend in the number of suicides under CR/HT, but the highest figure was in 2007 (7 deaths).
- 14 (44%) CR/HT patients died within 3 months of discharge.
- 10 (31%) CR/HT patients lived alone. Three (9%) had refused drug treatment in the month before suicide.



## Patients recently discharged from hospital

- There were 160 suicides within 3 months of discharge from in-patient care, 22% of all patients and 24% of suicides by community patients, an average of 15 deaths per year.
- There was an overall fall in the number of post-discharge suicides between 2001-2010, although there has been no fall since 2005 (Figure 43).
- Post-discharge suicides were most frequent in the first week after leaving hospital when 35 deaths occurred.

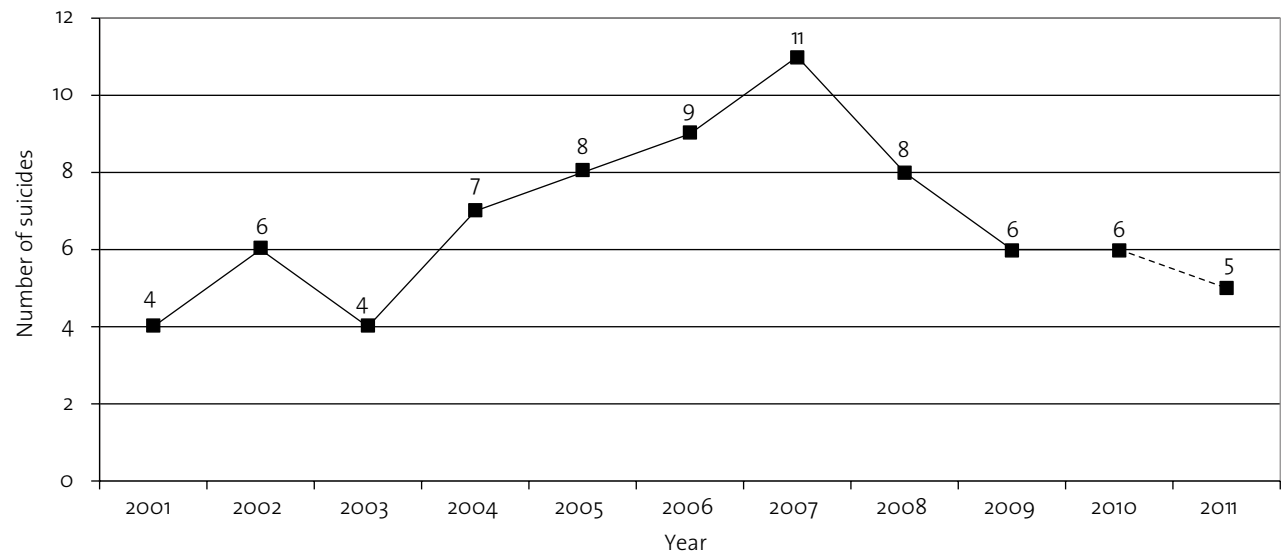
Figure 43: Patient suicide: number who died within 3 months of in-patient discharge



## Treatment refusal

- There were 74 suicides in which the patient was known to have refused drug treatment in the month before death, 12% of the total sample, an average of 7 deaths per year.
- There was no overall trend in the number of patient suicides following treatment refusal, although in recent years numbers have fallen since a peak in 2007 (Figure 44).

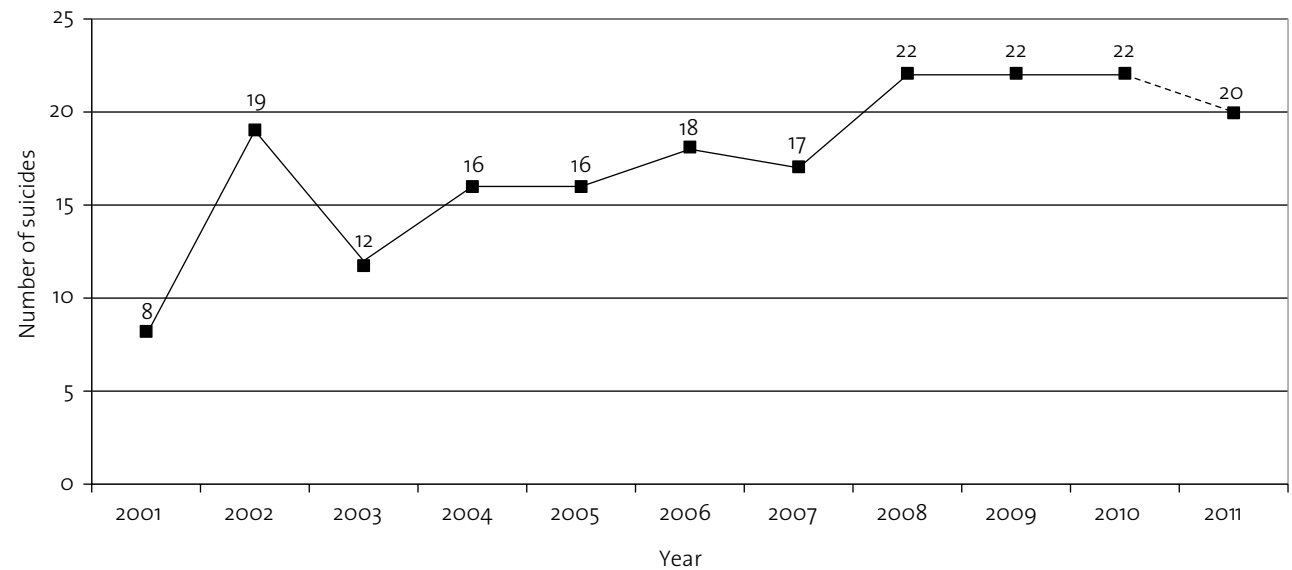
Figure 44: Patient suicide: number of patients who refused drug treatment



## Missed contact

- There were 192 suicides by people who missed their last appointment with services, 29% of the total sample, an average of 17 deaths per year.
- Between 2001 and 2010, there was an overall increase in the number of patient suicides following missed contact (Figure 45).

Figure 45: Patient suicide: number of patients who missed their last appointment with services



## Alcohol and drug misuse

- There were 435 suicides in people with a history of alcohol misuse, 61% of the total sample, an average of 40 deaths per year.
- 252 patient suicides had a history of drug misuse, 37% of the total sample, an average of 23 deaths per year.
- There were 478 patients who had a history of either alcohol or drug misuse or both, 68% of patient suicides, an average of 43 deaths per year.
- Between 2001 and 2010, there was an overall increase in the number of patient suicides with a history of drug misuse, whilst the number with a history of alcohol misuse did not change (Figure 46).
- 138 (20%) patient suicides had a primary diagnosis of alcohol dependence/misuse; 45 (6%) had drug dependence/misuse. The number with alcohol or drug dependence/misuse did not change over the report period.
- 111 (16%) patient suicides had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis). The number with dual diagnosis peaked in 2008 but there was no trend over the report period (Figure 47).

Figure 46: Patient suicide: number with a history of alcohol or drug misuse

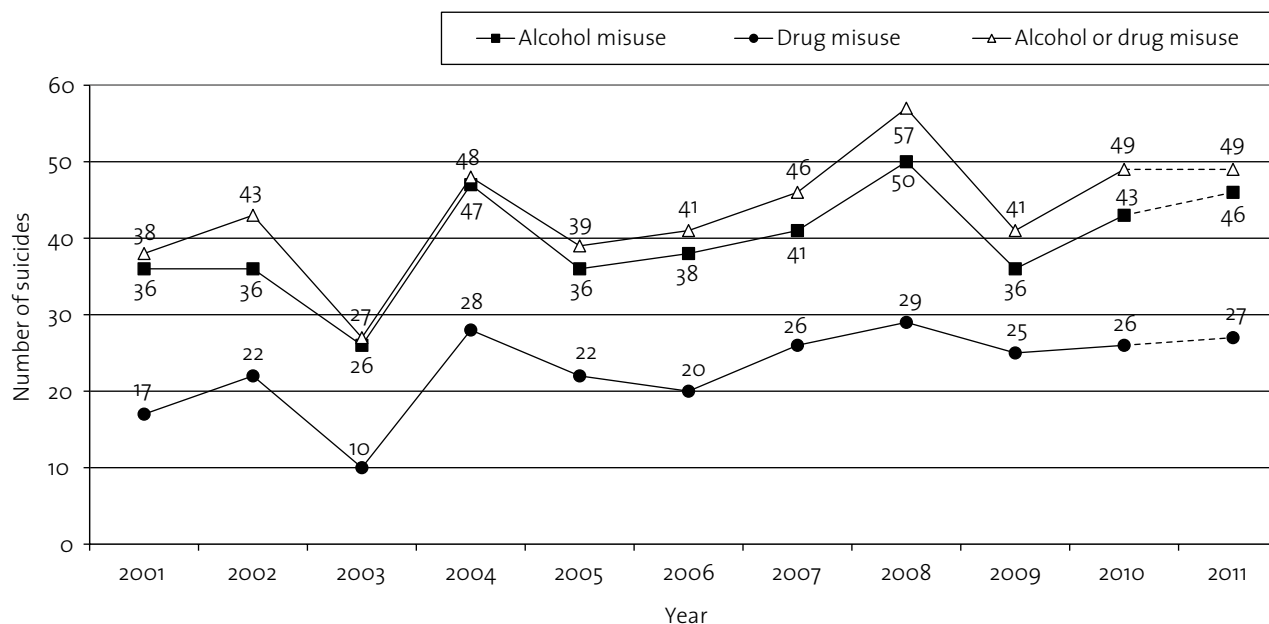
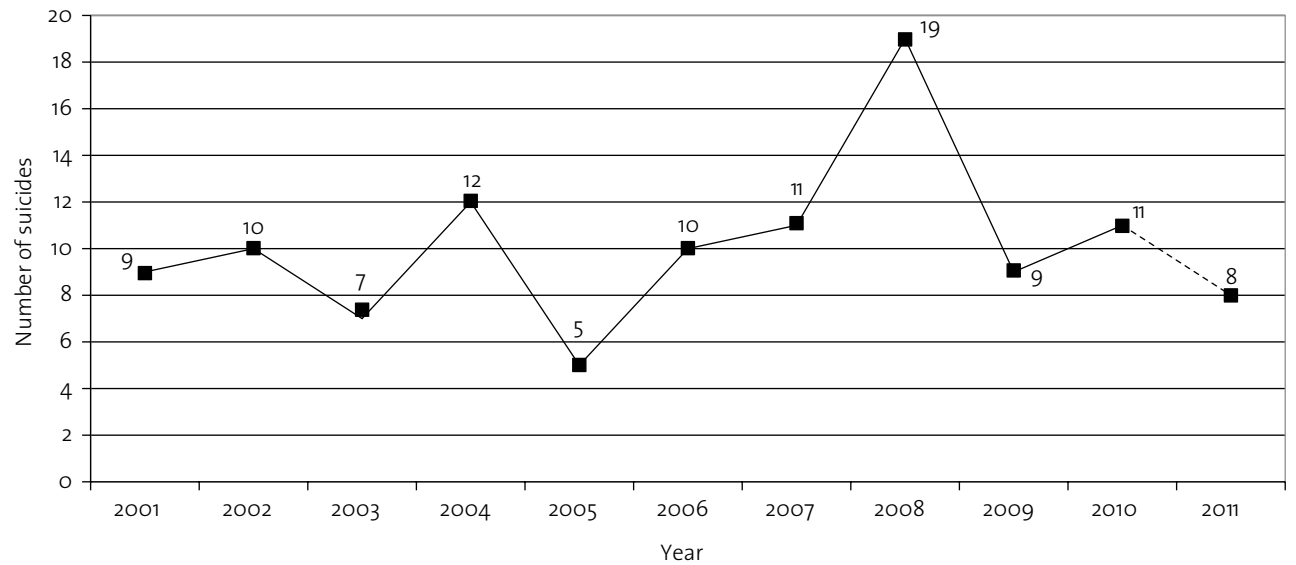


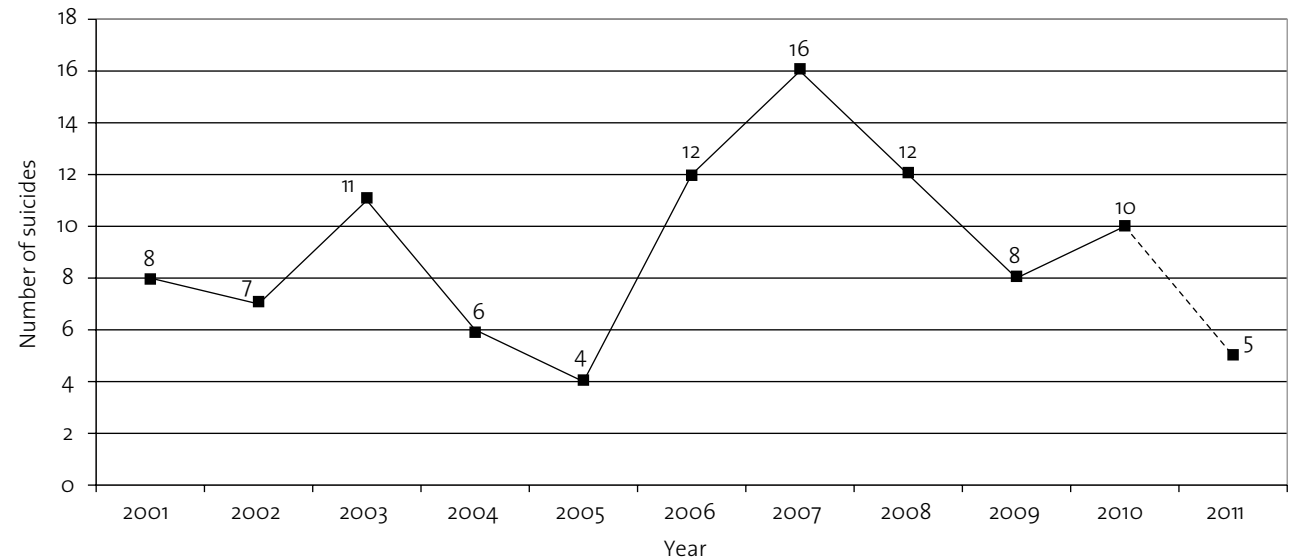
Figure 47: Patient suicide: number with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)



## Patients with schizophrenia

- There were 99 suicides by patients with a primary diagnosis of schizophrenia, 14% of the total sample, an average of 9 deaths per year.
- There was no overall trend in the number of suicides by patients with schizophrenia although numbers fell after a peak in 2007 and we project a continued fall in 2011 (Figure 48).
- 17 (18%) patients with schizophrenia had refused drug treatment in the month before death; 22 (24%) had missed their last appointment with services.

Figure 48: Patient suicide: number of patients with a primary diagnosis of schizophrenia



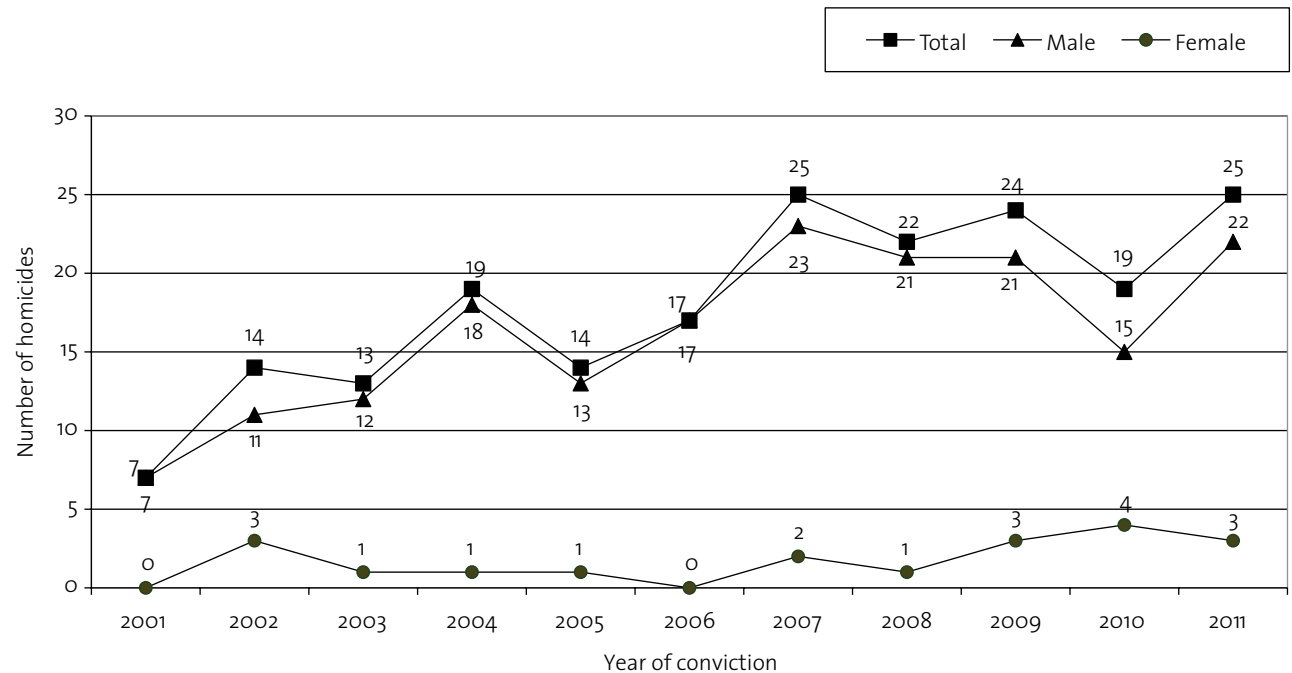
## 2.2 HOMICIDE

The Inquiry was notified by the Northern Ireland Courts and Tribunal Service of 199 homicide convictions in the report period, 2001-2011. A psychiatric report was obtained on 112 (56%) homicide perpetrators.

### 2.2.1 Homicide in the general population

- The number of homicide convictions in the general population notified to us is shown in Figure 49. These figures are provided as context for our data on homicides by people with mental illness. More recent homicide statistics are published by Police Service Northern Ireland.<sup>13</sup>
- There has been an apparent increase in homicide convictions over the report period (Figure 49). However, because of previous problems in data processes, this change should be treated with caution. Figures have been consistent since 2007.
- The most common method of homicide was the use of a sharp instrument (40% of the total population).
- The relationship of victim to perpetrator was: acquaintance (72, 41%); stranger (54, 31%); spouse/partner (including ex spouse/partner) (37, 21%); and other family member (12, 7%).

Figure 49: Number of homicide convictions in the general population, by gender of perpetrator





## 2.2.2 Homicide by mentally ill people in the general population

### Perpetrators who had symptoms of mental illness at the time of the homicide

- 16 people had an abnormal mental state at the time of the offence, 8% of the total sample, ranging between 0 and 4 annually.
- 8 people over the report period (4% of the total sample) had symptoms of psychosis at the time of the offence, ranging between 0 and 2 annually.

## 2.2.3 Patient homicide

- During 2001-2011, 26 people convicted of homicide (13% of the total sample) were identified as patients, i.e. the person had been in contact with mental health services in the 12 months prior to the offence. This was an average of 2 patient homicides per year, ranging between 1 and 4 annually.
- The numbers fluctuated over the period of the report. In this section the numbers were too small to examine trends over time.

### Relationship of victim to perpetrator: patient homicide

- The relationship of victim to perpetrator was: acquaintance (15, 63%); spouse/partner (including ex spouse/partner) (7, 29%); family member (1, 4%); and stranger (1, 4%).
- The victims for male patients were most likely to be acquaintances, whereas female patients killed a spouse/partner.

## Treatment refusal

- 5 patients (25%) were known to have refused drug treatment in the month before the homicide.

## Missed contact

- 12 patients (52%) had missed their last appointment with services before the offence, ranging between 0 and 2 annually.



## Alcohol and drug misuse

- 24 patients had a history of alcohol misuse, 100% of the patient sample (excluding unknowns). This was an average of 2 patient homicides per year, ranging between 1 and 4 annually.
- 20 patients had a history of drug misuse, 83% of the patient sample, an average of 2 per year, ranging between 1 and 3 annually.
- There were 25 patients who had a history of either alcohol or drug misuse or both, 100% of patients, an average of 2 homicides per year.
- 7 (27%) patients had a primary diagnosis of alcohol dependence/misuse; 1 (4%) had drug dependence/misuse.
- 7 (29%) patients had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis).

## Homicide by people with schizophrenia

- There were 7 homicides by people with schizophrenia (based on lifetime history) over the report period, 4% of the total sample.
- 4 (57%) people with schizophrenia were patients.
- 3 of the patients with schizophrenia were known to have refused drug treatment in the month before the homicide.
- 2 of the patients with schizophrenia missed their last appointment with services before the homicide.



### 3. SCOTLAND

#### 3.1 SUICIDE

Between 2001-2011, the Inquiry was notified of 9,065 deaths in the general population that received a suicide or undetermined verdict. These are referred to as suicides throughout the report.

#### 3.1.1 Suicide in the general population

• There was an overall fall in the rate and the number of suicides over the report period (Table 5; Figure 50). An apparent increase in 2011 occurred due to the introduction of new death coding rules (see page 14). Comparisons between suicide numbers and rates for 2001 to 2010, and 2011 should, therefore, be treated with caution as these two time periods are not directly comparable. Based on the old coding rules, we calculate there would have been 118 fewer suicides in 2011, making the total 775 and therefore closer to the figures seen in 2009 and 2010.

- The fall in rates over 2001-2010 was seen in males and females (Figure 50).
- The fall in gender-specific rates occurred particularly in the youngest and oldest groups – in men, those aged under 25, 25-34, and 65 and over; in women, those aged 65 and over (Figures 51 and 52).
- In males, numbers but not rates rose in those aged 45-64.

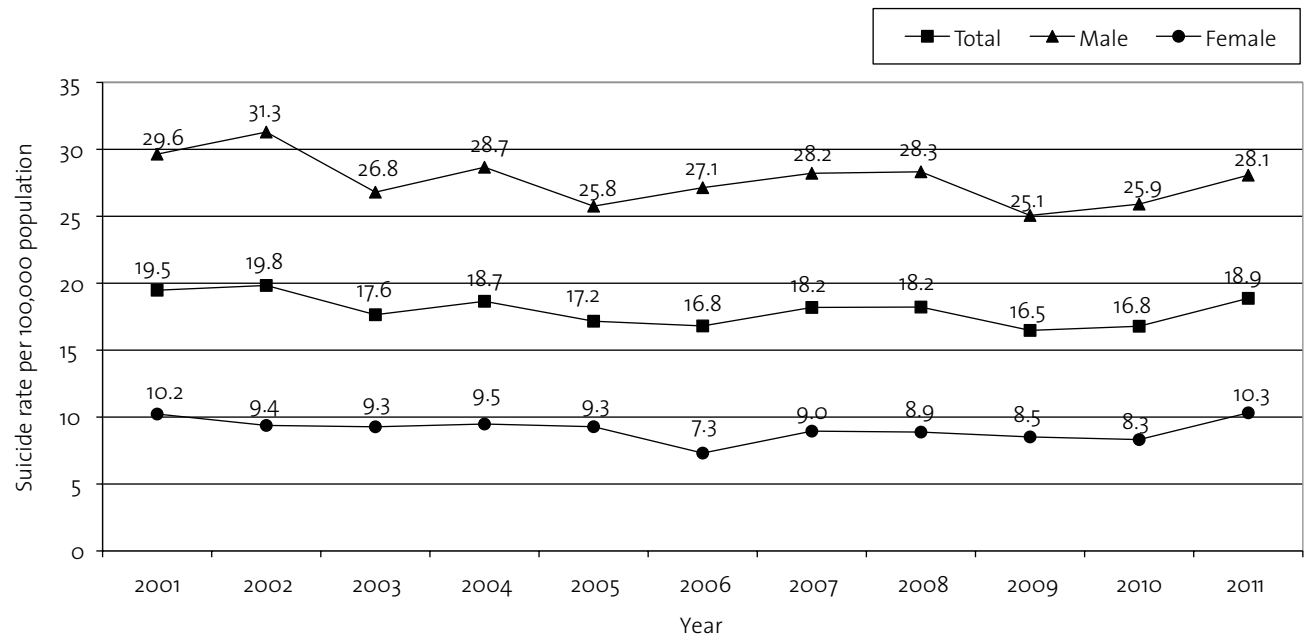
**Table 5: Number of suicides in the general population, by gender using the new death coding rules**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	633	670	576	620	560	594	622	628	559	581	640
Female	240	220	218	224	220	174	214	213	205	201	253
Total	873	890	794	844	780	768	836	841	764	782	893 <sup>†</sup>

<sup>†</sup> This figure would fall to 775 using the old death coding rules



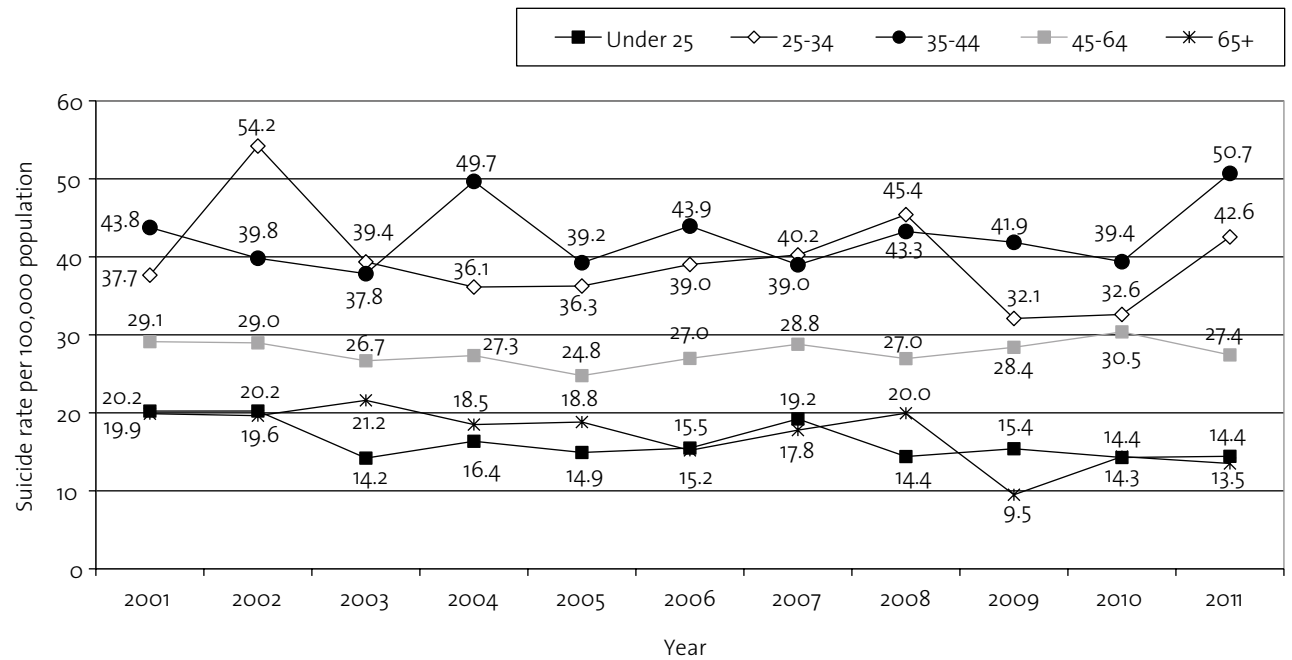
Figure 50: Rates of suicide in the general population, by gender



Note: figures for 2011 include suicides using the new death coding rules (see page 14)



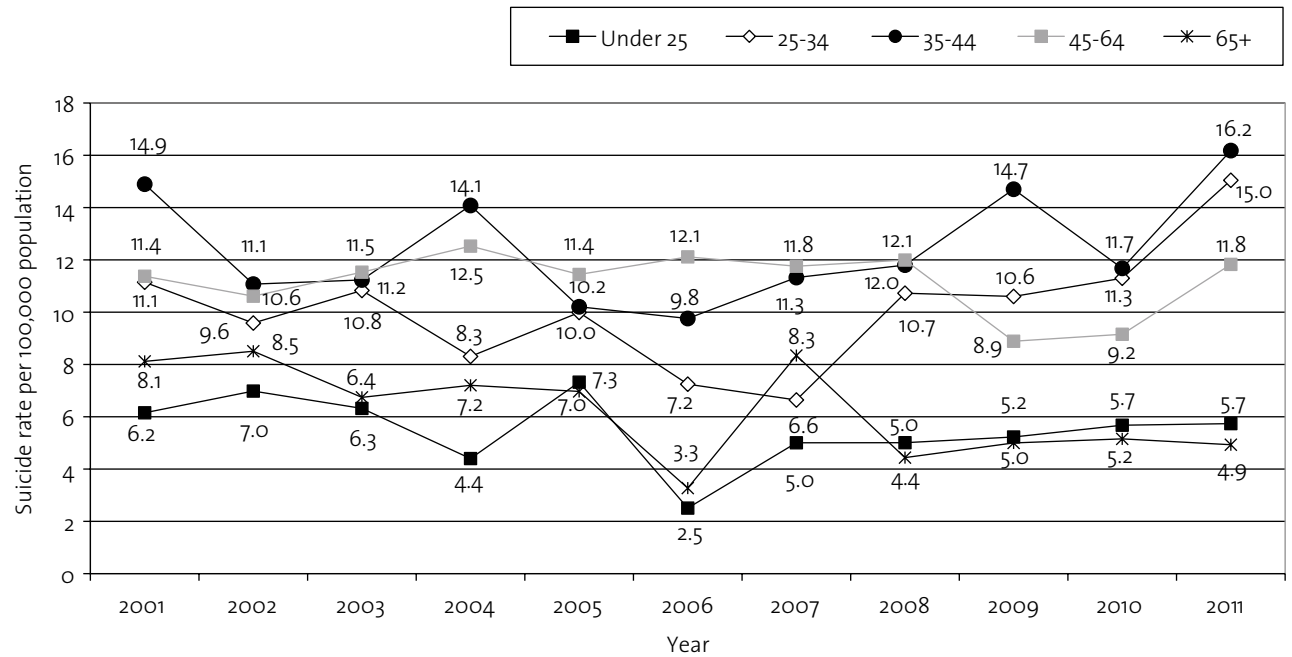
Figure 51: Rates of male suicide in the general population, by age-group



Note: figures for 2011 include suicides using the new death coding rules (see page 14)



Figure 52: Rates of female suicide in the general population, by age-group



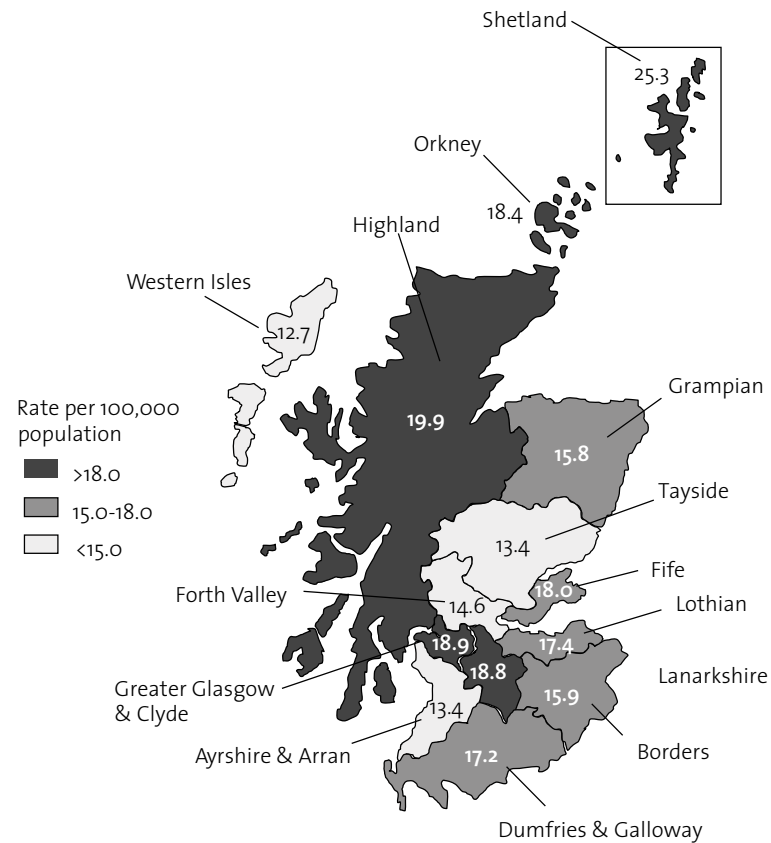
Note: figures for 2011 include suicides using the new death coding rules (see page 14)



## Variation in suicide by region

- There was some variation in suicide rates by Health Board of residence at the time of death (2009-2011). The highest rate of suicide was in the Shetlands, at 25.3 per 100,000 population but the small numbers and small population there make it difficult to compare with other Health Boards (Figure 53). The lowest rate was in the Western Isles at 12.7 per 100,000 population, but again small numbers and populations may lead to large fluctuations in rates.

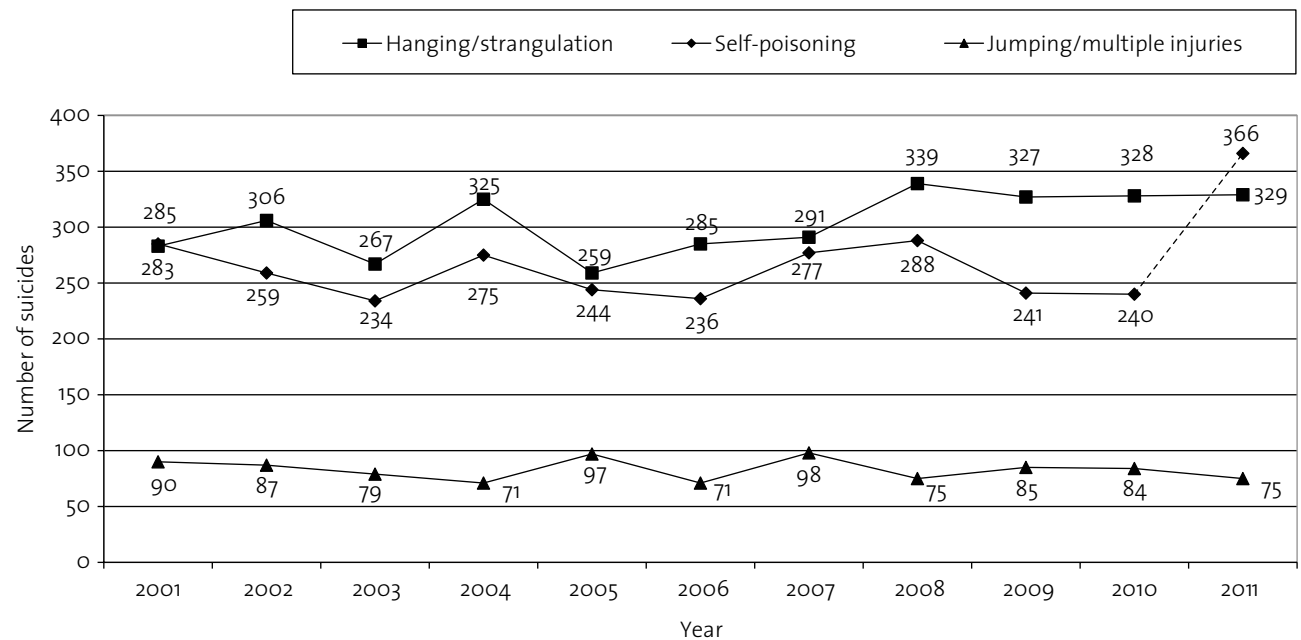
Figure 53: Rate of suicide per 100,000 population, by Health Board of residence (average rate 2009-2011)



## Method of suicide

- The most common methods of suicide were hanging/strangulation (36%), self-poisoning (overdose) (32%), and jumping/multiple injuries (mainly jumping from a height or being struck by a train) (10%). Less frequent methods were drowning (9%), carbon monoxide (CO) poisoning (3%), firearms (2%), and cutting/stabbing (2%).
- Over the period 2001-2010 there were changes in method of suicide. Suicide deaths by hanging increased steadily (Figure 54). The apparent increase in suicides by self-poisoning in 2011 is the result of additional cases arising from the new rules for death coding (see page 14).
- Deaths by drowning and CO poisoning decreased (Figure 55).
- The fall in CO deaths reflects the lower toxicity of modern cars. The fall in drowning, by which numbers have fallen by almost half, is unexplained.

Figure 54: Suicide in the general population: main causes of death

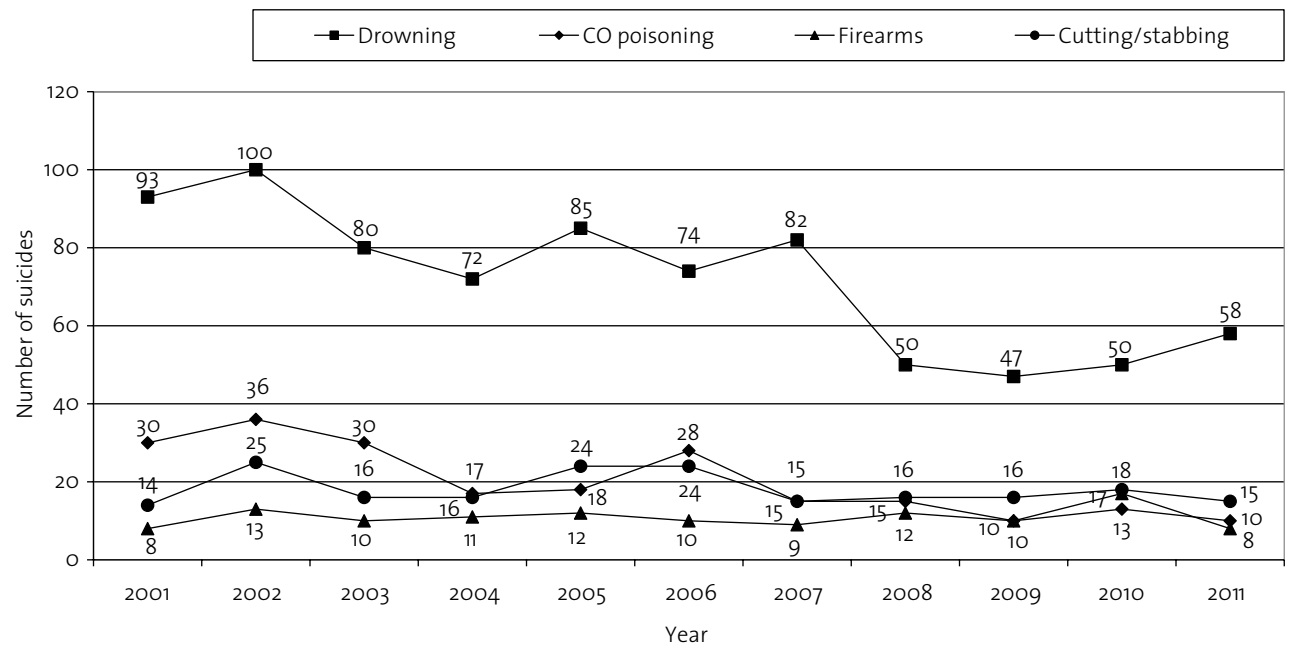


Note: using the old death coding rules, we estimate the number of self-poisonings in 2011 to be 248.





Figure 55: Suicide in the general population: other causes of death



### 3.1.2 Patient suicide

#### Patient suicide: numbers and rates

- During 2001-2011, 2,678 suicides (30% of general population suicides) were identified as patient suicides, i.e. the person had been in contact with mental health services in the 12 months prior to death. This represents an average of 243 patient suicides per year.

- The increase in suicide figures for the general population, resulting from a coding change (see page 14), has also led to an apparent rise in patient suicides in 2011. Based on the old coding rules, we calculate there would have been 55 fewer suicides in 2011, making the total 255 – this is still one of the highest annual figures in the report period.
- There was no overall trend in the number of patient suicides in 2001-2010, or in the rate (using a general population denominator) (Table 6; Figure 56).

- The number of patient suicides did not change in any gender or age-group between 2001-2010 – our projected rises in 2011 in those aged 25-44 and 45-64 are the result of re-coding in cause of death (Figure 57).
- 32 (1%) patient suicides were aged under 18, an average of 3 per year, with no overall trend.
- In 2008-2010, 49% of patients were unemployed compared to 46% in 2001-2003. This difference is not statistically significant.

**Table 6: Number of patient suicides, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Male	142	164	164	161	135	136	181	161	131	151	201
Female	96	74	82	90	83	73	101	69	90	84	110
Total	238	238	246	251	218	209	282	230	221	235	310†

\* projected figure

† This figure would fall to 255 using the old death coding rules



Figure 56: Rates of patient suicide, by gender

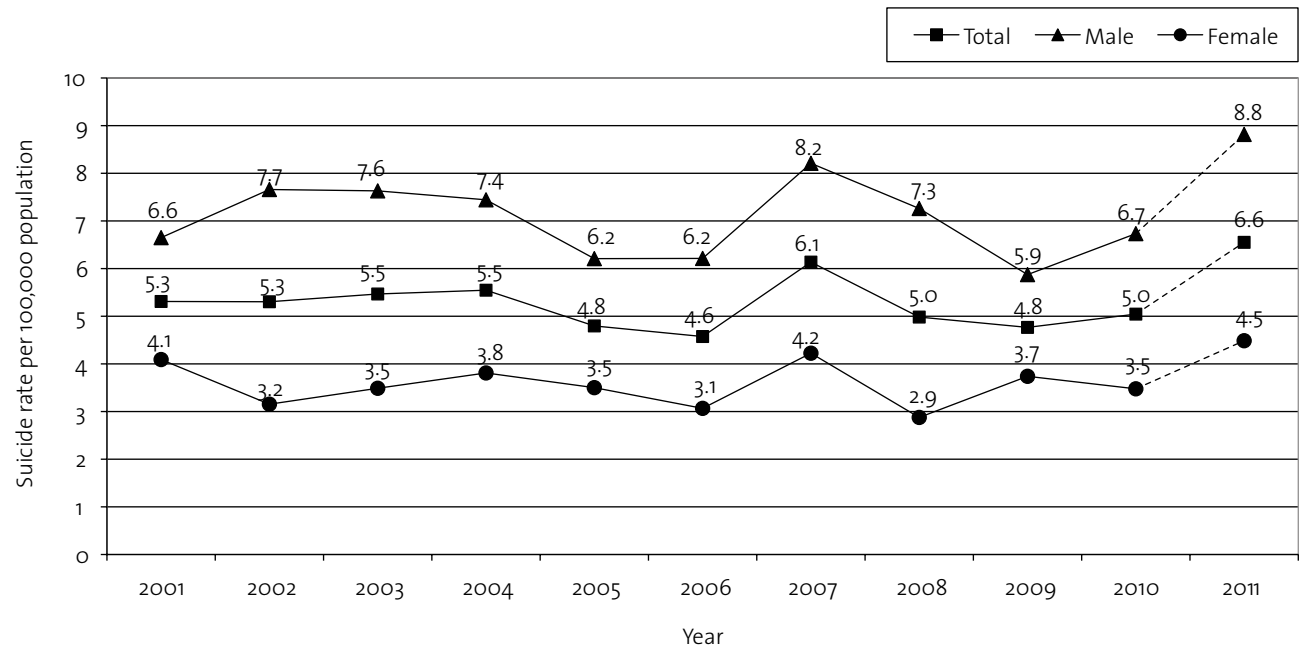
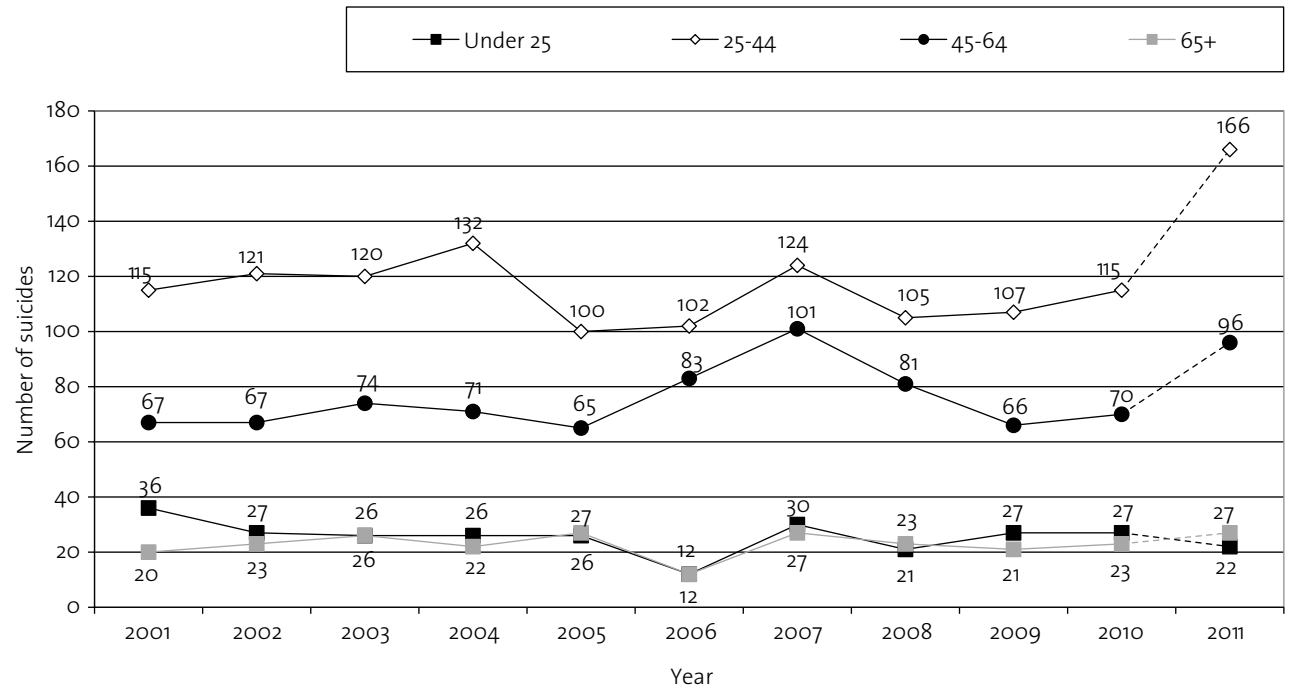


Figure 57: Number of patient suicides, by age-group



## Method of suicide by patients

- The most common methods of suicide by patients were self-poisoning (37%) and hanging/strangulation (34%). There was no change in deaths by these methods over the period 2001-2010 (Figure 58).
- The number of deaths by carbon monoxide (CO) poisoning and drowning decreased during the reporting period (Figure 58). Figures 58 and 59 show the marked effect of a coding change in cause of death which has caused an apparent increase in self-poisoning deaths using opiates. Under the old coding rules we estimate that these figures would have been consistent with previous years.
- The most common substances used in deaths by self-poisoning were opiates (33%), tricyclic antidepressants (14%) and paracetamol/opiate compounds (12%).
- Between 2001 and 2010, there was an increase in suicides by overdose of opiates and antipsychotics, and a fall in suicides by overdose of tricyclic antidepressants (Figure 59).

Figure 58: Patient suicide: main causes of death

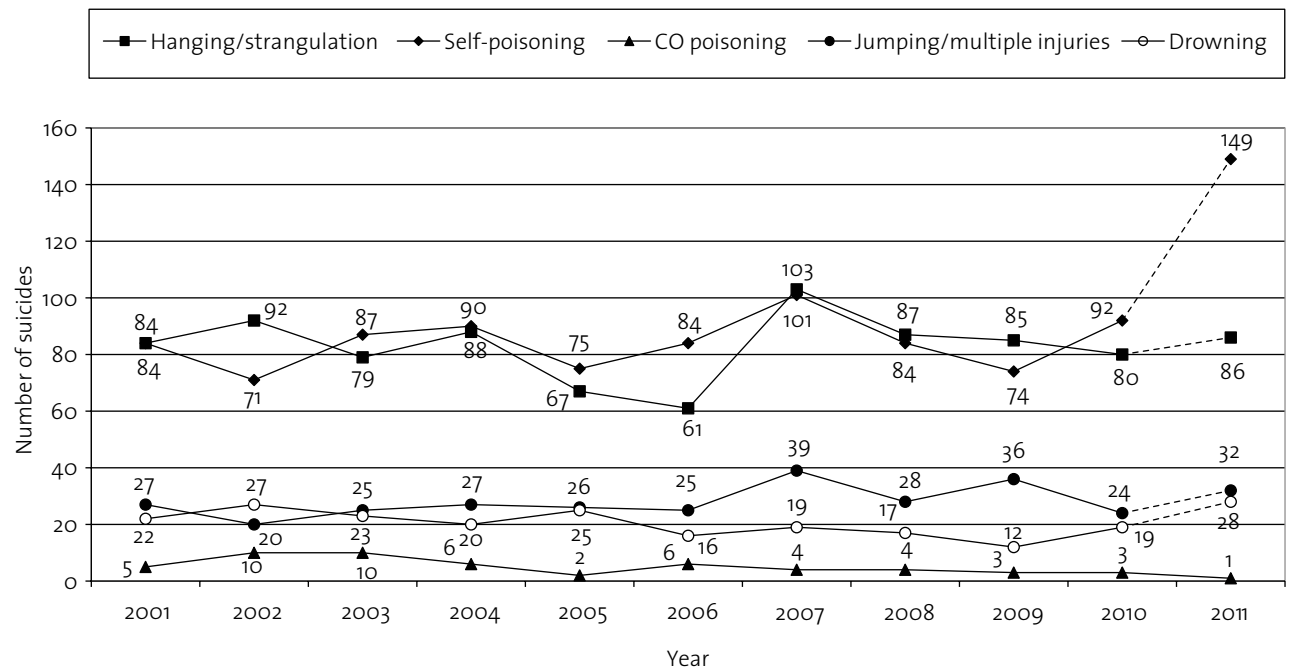
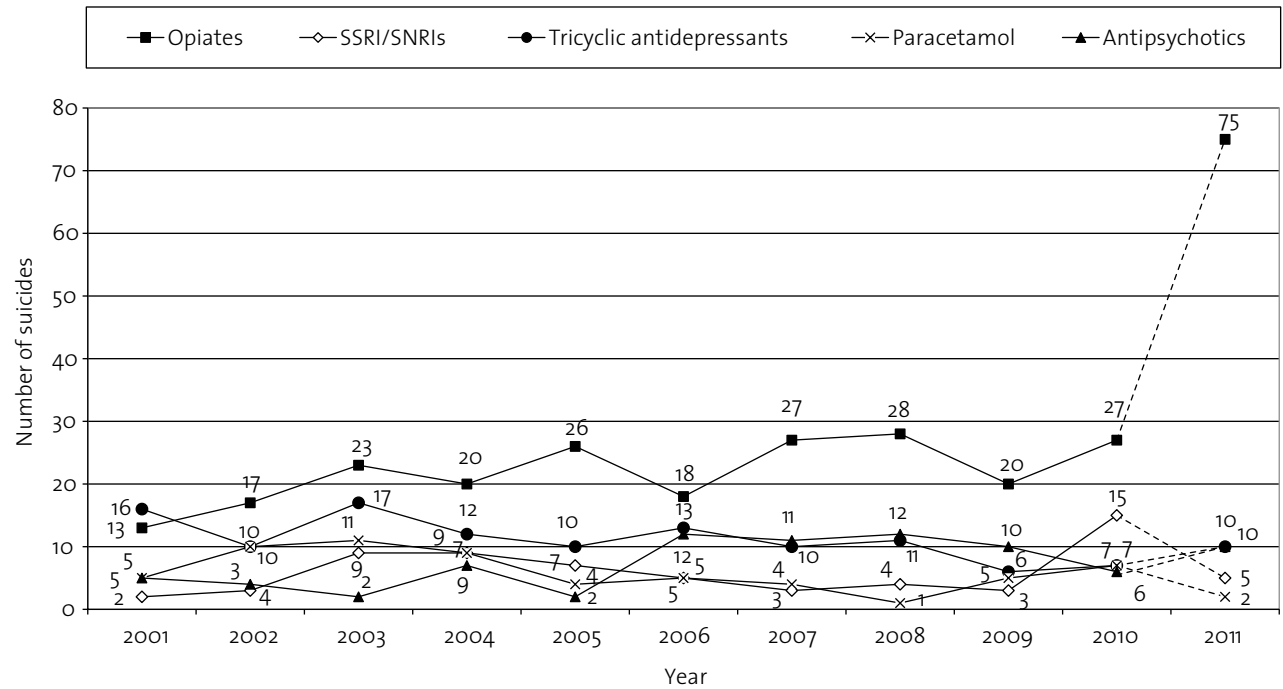


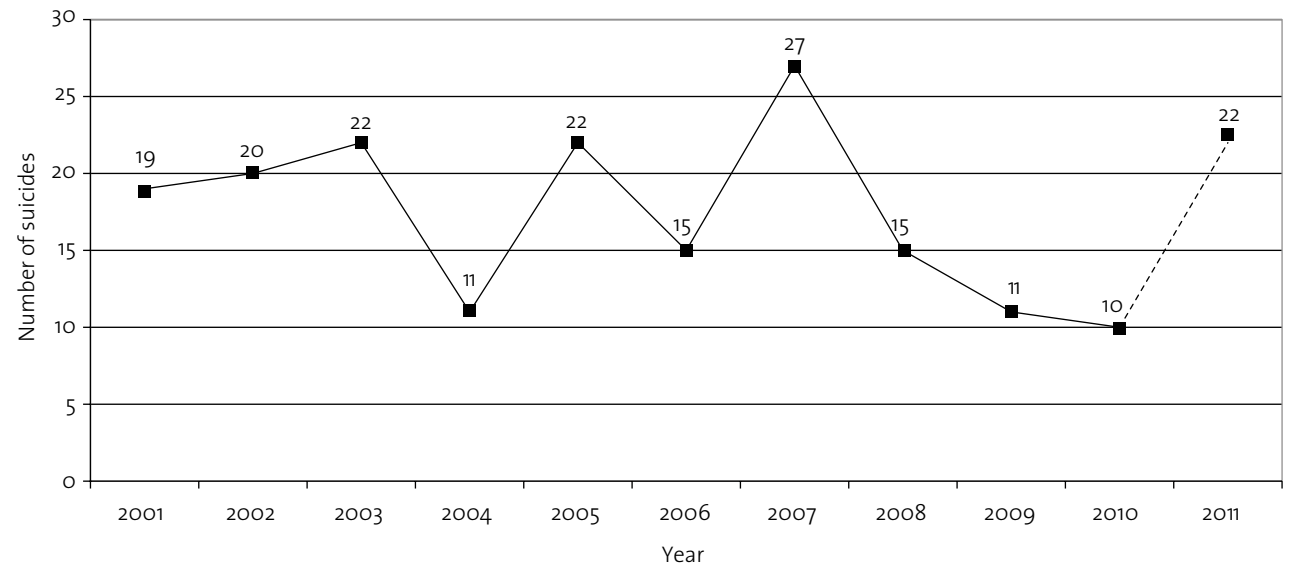
Figure 59: Patient suicide: main substances used in deaths by self-poisoning



## In-patient suicide

- There were 194 in-patient deaths by suicide during 2001-2011, 7% of patient suicides, an average of 18 deaths per year.
- There was no overall trend in the number of in-patient suicides between 2001 and 2010, although numbers have fallen since a peak in 2007 (Figure 60). The projected figure for 2011 is higher than for the previous 3 years.
- Over the 11-year period, there were 38 patients who died on the ward by hanging; this number fluctuated from 1 to 7 per year.
- The ligature points in 15 of these related to doors or windows; in 15 a belt was used as the ligature.
- There were 49 (25%) detained in-patients who died by suicide, an average of 4 per year. The number of detained suicides did not change over the report period.

Figure 60: Patient suicide: number of mental health in-patients



## Absconding

- There were 49 in-patients who died after absconding from the ward, 25% of all in-patient suicides, an average of 4 deaths per year.

## Compulsory Treatment Orders in the community

- There were 25 suicide deaths among patients subject to a compulsory treatment order (CTO) in the community between 2006-2011, 2% of all patient suicides. The highest annual number was in 2008 (8 patients).
- 7 suicides subject to a CTO had refused drug treatment in the month before death, and 3 had missed the last appointment with services (none had refused treatment and missed the last appointment).
- 16 suicides (64%) among patients subject to a CTO in the community were living alone.

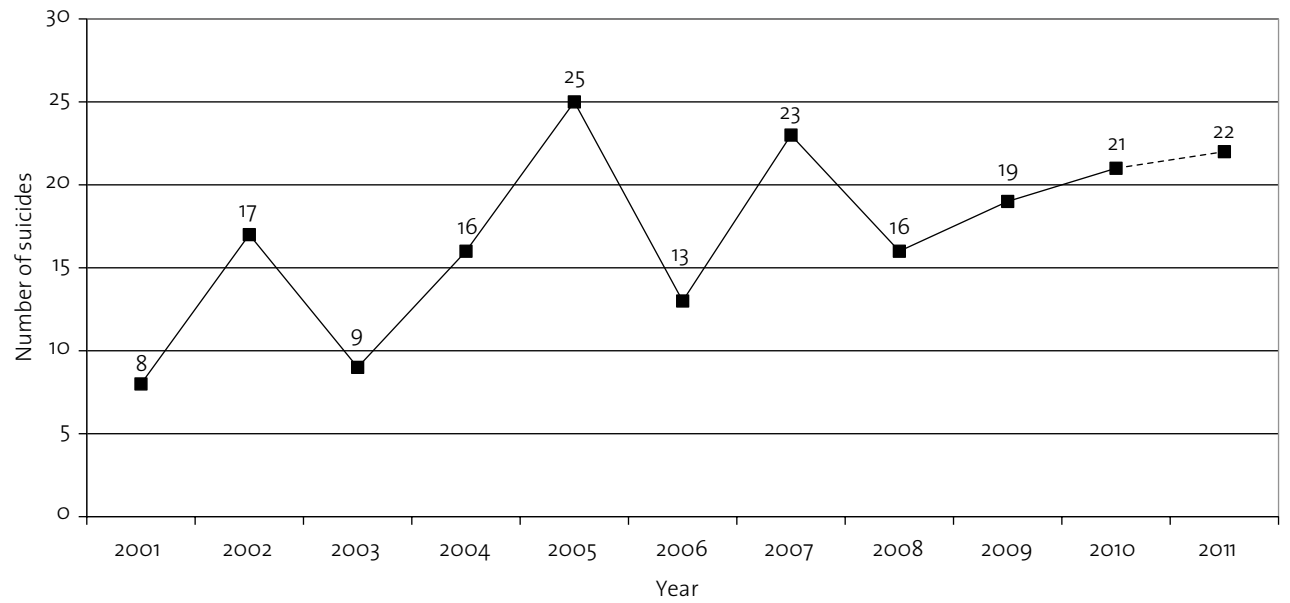
## Crisis Resolution/Home Treatment

- There were 189 suicides who had been under crisis resolution/home treatment teams (CR/HT), 8% of the total sample, an average of 17 deaths per year.
- Suicides under CR/HT rose in the early part of the report period, reflecting increasing services of this kind. There has been no overall rise since 2005 (Figure 61).
- 74 (42%) CR/HT suicides occurred within 3 months of hospital discharge, 25 (34%) within 2 weeks.
- 101 (55%) patients under CR/HT lived alone. 25 (14%) refused treatment in the month before suicide.





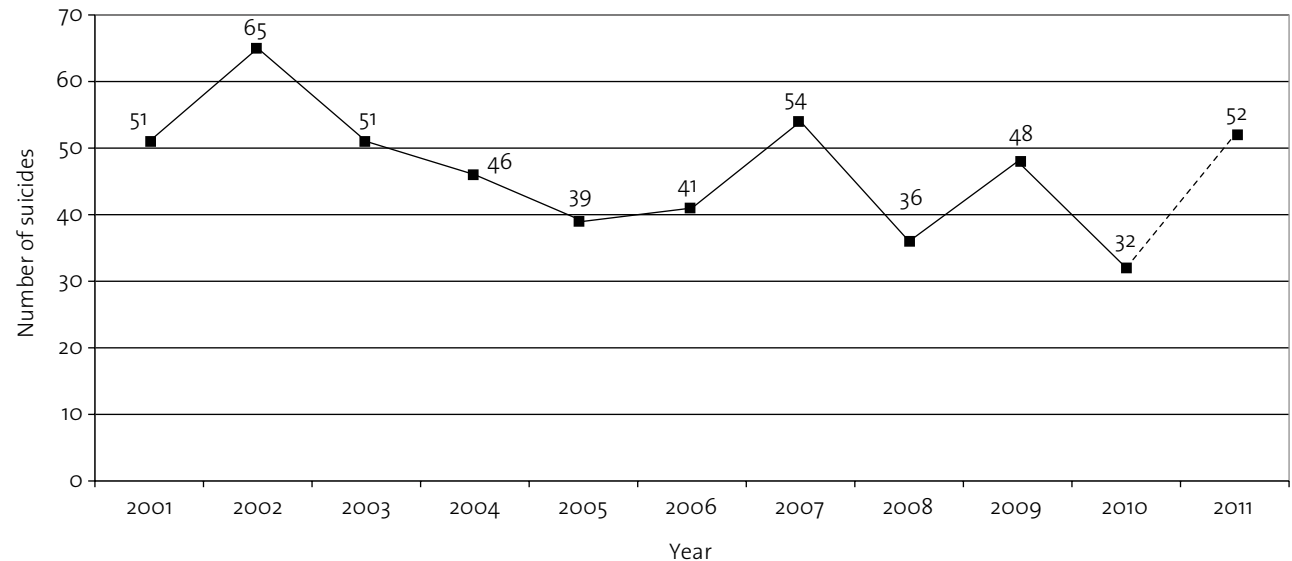
Figure 61: Patient suicide: number of patients under crisis resolution/home treatment services



## Patients recently discharged from hospital

- There were 515 suicides within 3 months of discharge from in-patient care, 19% of all patients and 21% of suicides by community patients, an average of 47 deaths per year.
- There was an overall fall in the number of post-discharge suicides between 2001-2010, although our projected figures show a rise in 2011 (Figure 62).
- Post-discharge suicides were most frequent in the first week after leaving hospital when 91 deaths occurred.

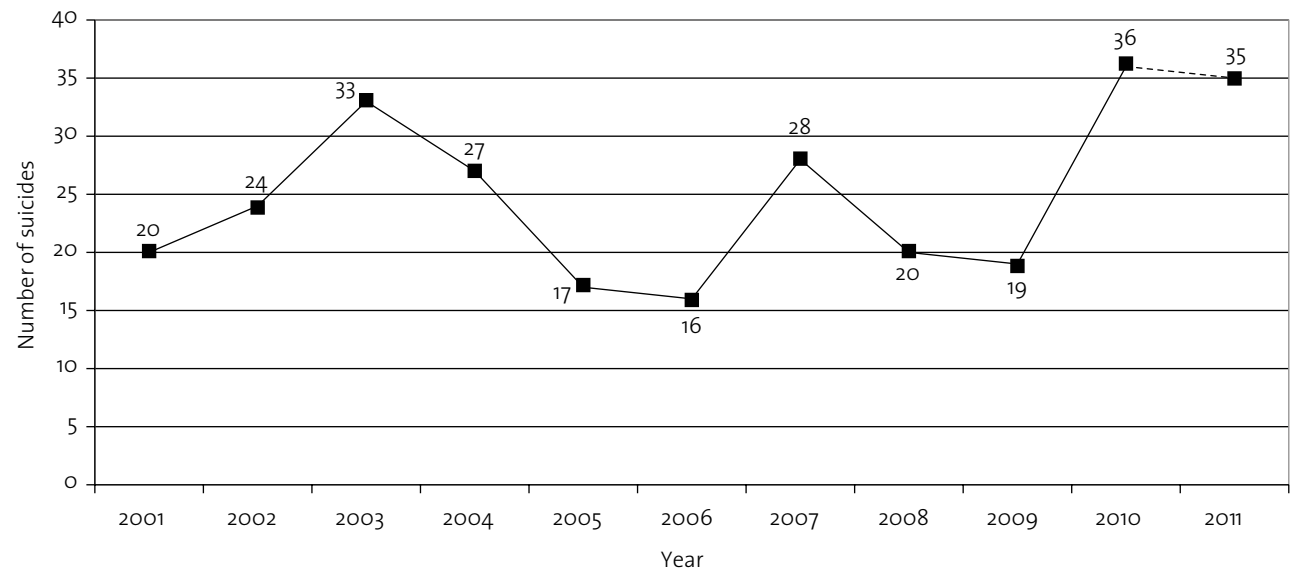
Figure 62: Patient suicide: number who died within 3 months of in-patient discharge



## Treatment refusal

- There were 275 suicides in which the patient was known to have refused drug treatment in the month before death, 12% of the total sample, an average of 25 deaths per year.
- There were fluctuations in the number of suicides in patients who refused drug treatment, with no clear trend. However the highest number was seen in 2010 with a similar number projected for 2011 (Figure 63).

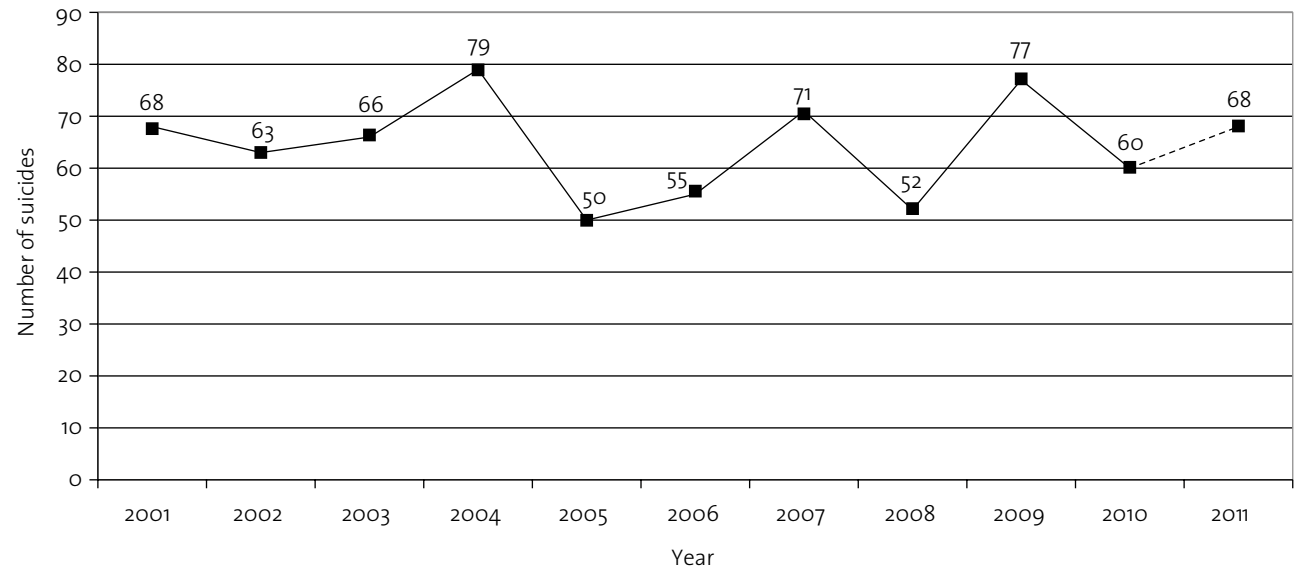
Figure 63: Patient suicide: number of patients who refused drug treatment



## Missed contact

- There were 709 suicides by people who missed their last appointment with services, 29% of the total sample, an average of 64 deaths per year.
- The number of patient suicides following missed contact fluctuated over the 10-year period (Figure 64).

Figure 64: Patient suicide: number of patients who missed their last appointment with services



## Alcohol and drug misuse

- There were 1,535 suicides in people with a history of alcohol misuse, 58% of the total sample, an average of 140 deaths per year.
- 1,098 patient suicides had a history of drug misuse, 42% of the total sample, an average of 100 deaths per year.
- There were 1,823 patients who had a history of either alcohol or drug misuse or both, 69% of patient suicides, an average of 166 deaths per year.
- Between 2001 and 2010, the number of patient suicides with a history of alcohol or drug misuse did not change, although we project rises in 2011 (Figure 65).
- 448 (17%) patient suicides had a primary diagnosis of alcohol dependence/misuse; 285 (11%) had drug dependence/misuse. The number with alcohol or drug dependence/misuse did not change over the report period.
- 405 (15%) patient suicides had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis), an average of 37 deaths per year. The number of patient suicides with dual diagnosis fell in 2009-2010 although we project an increase in 2011 (Figure 66).

Figure 65: Patient suicide: number with a history of alcohol or drug misuse

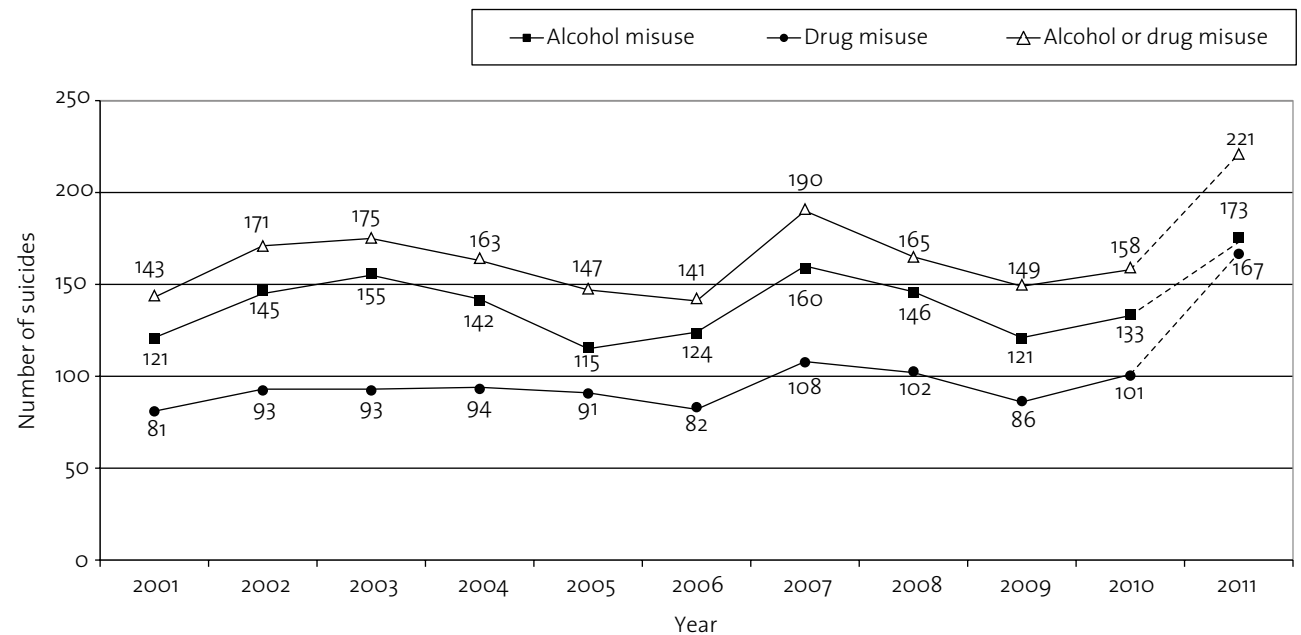
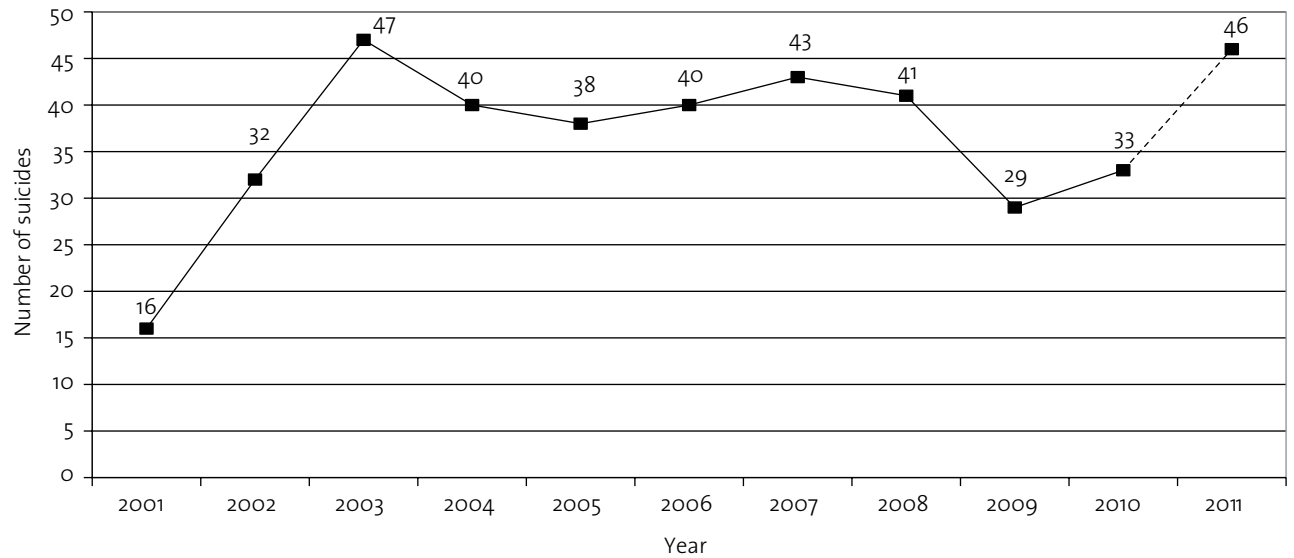


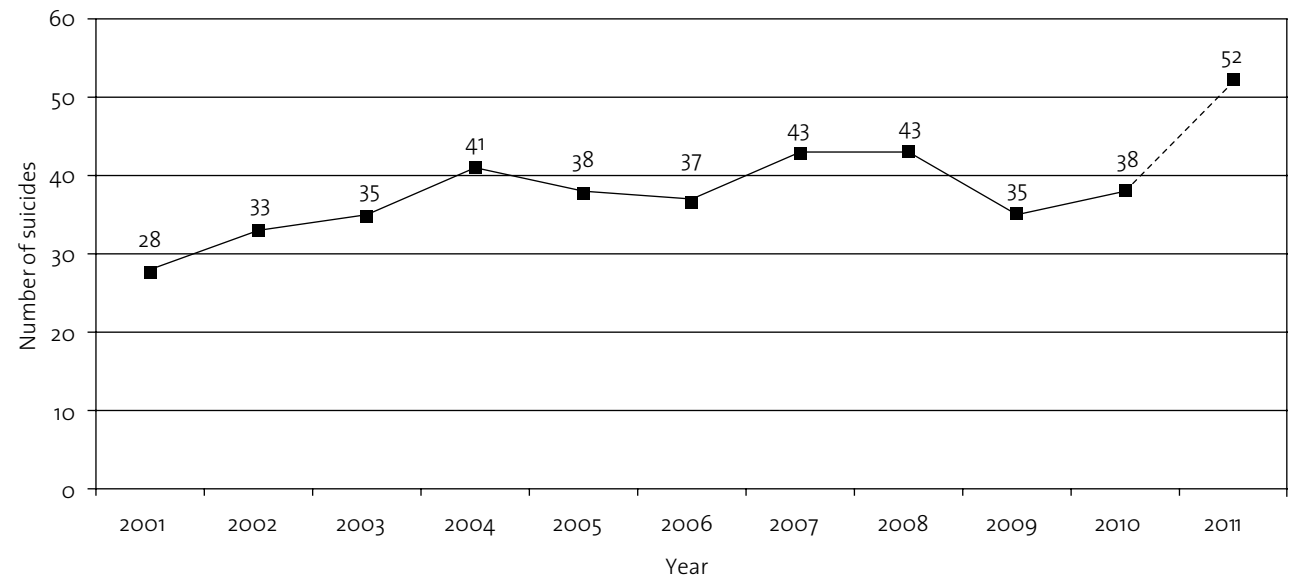
Figure 66: Patient suicide: number with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)



## Patients with schizophrenia

- There were 423 suicides by patients with a primary diagnosis of schizophrenia, 16% of the total sample, an average of 38 deaths per year.
- There was no overall trend in the number of suicides by patients with schizophrenia (Figure 67). Although we project an increase in 2011, this figure should be treated with caution because of changes in the coding of cause of death (see page 14).
- There were 81 suicides by patients with schizophrenia who had refused drug treatment in the month before death, 20% of the sample, an average of 7 deaths per year.
- A similar proportion (80, 22%) had missed their last appointment with services.

Figure 67: Patient suicide: number of patients with a primary diagnosis of schizophrenia



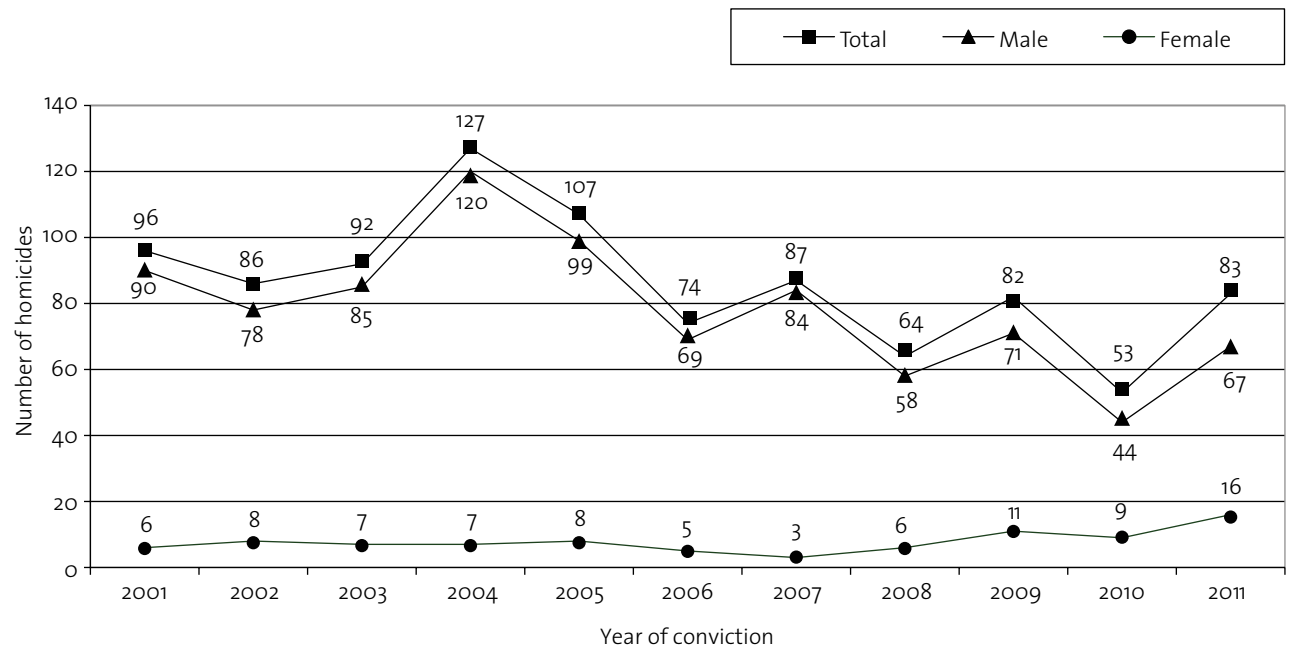
## 3.2 HOMICIDE

The Inquiry was notified by the Management Information Analysis Team at the Scottish Court Service of 951 homicide convictions in the report period, 2001-2011. A psychiatric report was obtained on 712 (75%) homicide perpetrators.

### 3.2.1 Homicide in the general population

- The number of homicide convictions in the general population is shown in Figure 68. These figures are provided as context for our data on homicides by people with mental illness. More recent homicide statistics are published by the Scottish Government.<sup>10</sup>
- There has been a fall in the number of homicide convictions since a peak in 2004 (Figure 68). The number of homicides in 2010 was the lowest recorded over the report period, although an increase has been recorded in 2011.
- The most common method of homicide was the use of a sharp instrument (56% of the total sample).

Figure 68: Number of homicide convictions in the general population, by gender of perpetrator





## Relationship to victim of perpetrator

- The relationship of victim to perpetrator was: acquaintance (506, 59%); stranger (167, 20%); spouse/partner (including ex spouse/partner) (101, 12%); and other family member (80, 9%).
- There has been a fall in the number of victims who were spouse/partners (including ex spouse/partners) and a fall in the number who were strangers and acquaintances over the report period.

## 3.2.2 Homicide by mentally ill people in the general population

### Perpetrators who had symptoms of mental illness at the time of the homicide

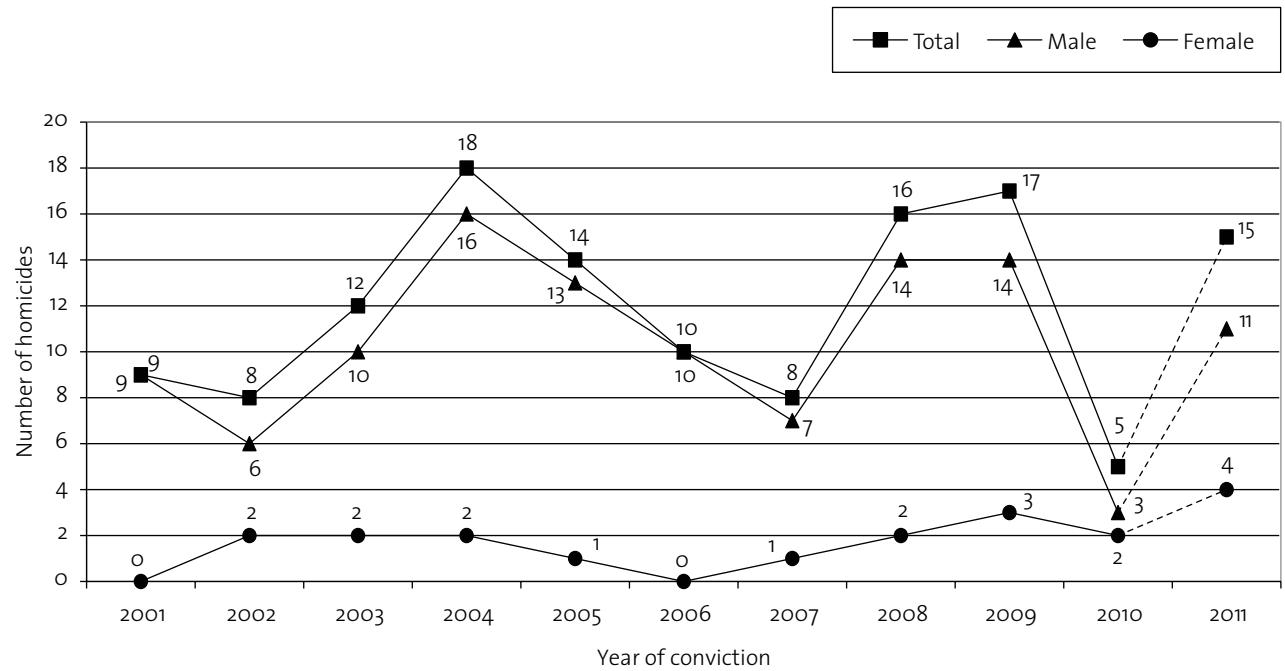
- 52 people had an abnormal mental state at the time of the offence, 5% of the total sample, an average of 5 per year, ranging between 2 and 8 annually, with no overall trend.
- 25 people, 3% of the total sample, had symptoms of psychosis at the time of the offence, an average of 2 per year, ranging between 0 and 5 annually, with no overall trend.

## 3.2.3 Patient homicide

- During 2001-2011, 132 people convicted of homicide, 14% of the total sample, were identified as patients, i.e. the person had been in contact with mental health services in the 12 months prior to the offence. This was an average of 12 patient homicides per year.
- Patient homicides in Scotland are therefore a slightly higher proportion of comparatively high population homicide figures.
- The numbers fluctuated over the period of the report, and no overall trend was found (Figure 69). Numbers for 2010 were comparatively low but our projection for 2011 is similar to figures for previous years.
- There were no trends in the number of patient homicides by age-group.
- No patients were subject to a compulsory treatment order (CTO) at last discharge or at the time of the offence.



Figure 69: Number of patient homicides, by gender of perpetrator



## Relationship of victim to perpetrator: patient homicide

- The relationship of victim to perpetrator was: acquaintance (65, 55%); family member (21, 18%); spouse/partner (including ex spouse/partner) (20, 17%); and stranger (17, 14%).
- The number of stranger homicides by patients fluctuated over the report period, and ranged between 0 and 3 annually, with no overall trend.
- The victims for male patients were most likely to be acquaintances whereas for females, spouses/partners (including ex spouses/partners) and acquaintances were equally common.

## Treatment refusal

- 14 patients (13%) were known to have refused drug treatment in the month before the homicide, ranging between 0 and 3 annually, with no overall trend.

## Missed contact

- 51 patients (41%) had missed their last appointment with services before the offence, an average of 5 per year, ranging between 2 and 7 annually.

## Crisis Resolution/Home Treatment

- 3 patients had been under crisis resolution/home treatment teams (CR/HT) at the time of the homicide, 3% of the patient sample.
- All patients were male, 2 lived alone. One refused drug treatment in the month before the homicide.

## Alcohol and drug misuse

- 102 patients had a history of alcohol misuse, 86% of the patient sample. This was an average of 9 patient homicides per year, ranging between 5 and 13 annually.
- 110 patients had a history of drug misuse, 89% of the patient sample, an average of 10 per year, ranging between 4 and 16 annually.
- There were 121 patients who had a history of either alcohol or drug misuse or both, 95% of patients, an average of 11 homicides per year.
- There was no trend in the number of patient homicides with alcohol or drug misuse over the report period.

- 22 (17%) patients had a primary diagnosis of alcohol dependence/misuse; 39 (30%) had drug dependence/misuse.
- 23 (18%) patients had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis).

## Homicide and schizophrenia

- There were 30 homicides by people with schizophrenia (based on lifetime history), 3% of the total sample, an average of 3 per year.
- 17 (57%) people with schizophrenia were patients, ranging between 0 and 4 annually.
- 2 patients with schizophrenia were known to have refused drug treatment in the month before the homicide.
- 5 patients with schizophrenia missed their appointment with services before the homicide.



## 4. WALES

### 4.1 SUICIDE

Between 2001-2011, the Inquiry was notified of 3,450 deaths in the general population that received a suicide or undetermined verdict. These are referred to as suicides throughout the report.

#### 4.1.1 Suicide in the general population

- There was a fall in the number and rate of suicides between 2001 and 2010, although figures fluctuated (Table 7; Figure 70). Falls in rates over the report period were observed in both males and females (Figure 70), although the number of female suicides did not change.

- Our figure for 2010 has increased by 5% since it was estimated in last year's report. Our figure for 2011 is already higher than for recent years and may rise further once delayed notifications are added.
- Rates fell in males aged under 25 and 25-34 (Figure 71). Female rates fell in those aged under 25 (Figure 72).

**Table 7: Number of suicides in the general population, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	252	257	291	239	247	228	236	224	227	235	247
Female	75	72	82	75	70	65	60	79	57	66	66
Total	327	329	373	314	317	293	296	303	284	301	313



Figure 70: Rates of suicide in the general population, by gender

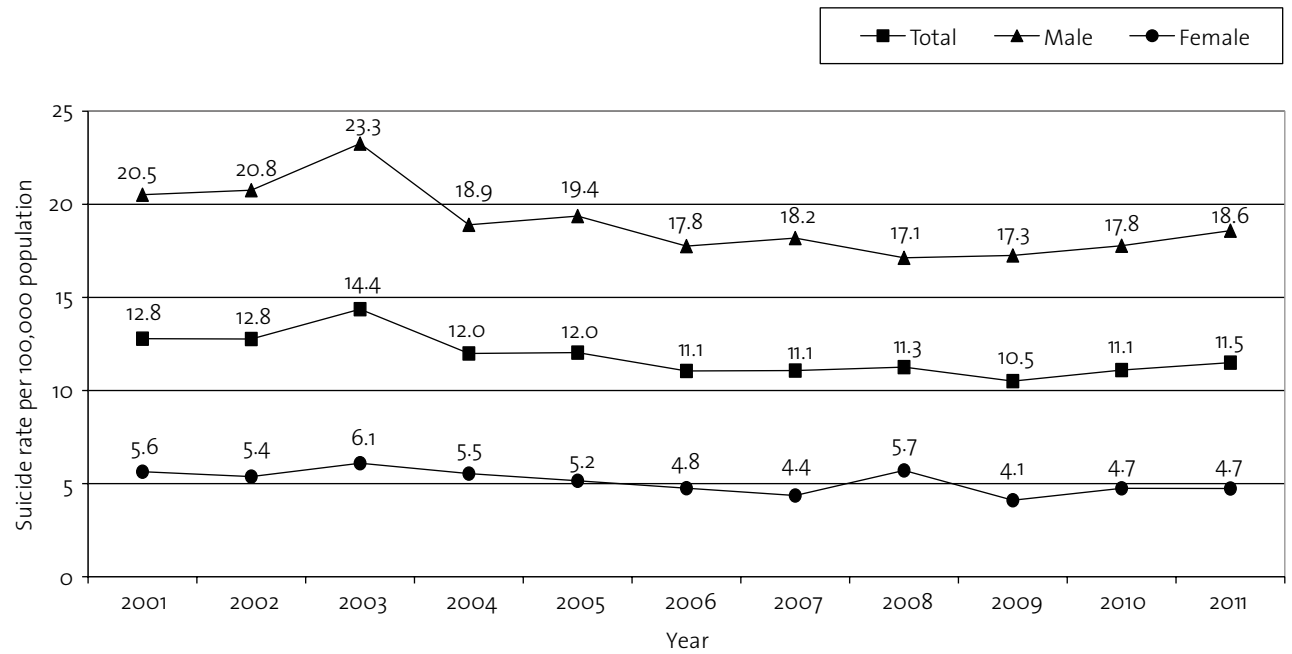


Figure 71: Rates of male suicide in the general population, by age-group

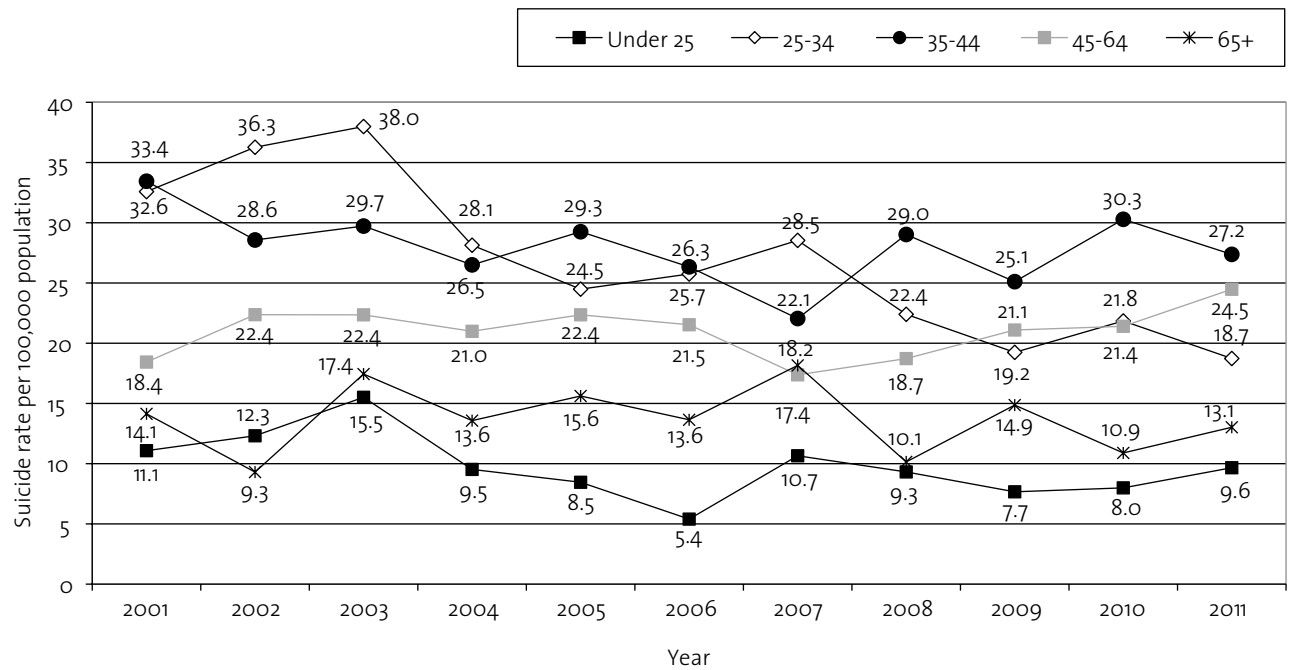
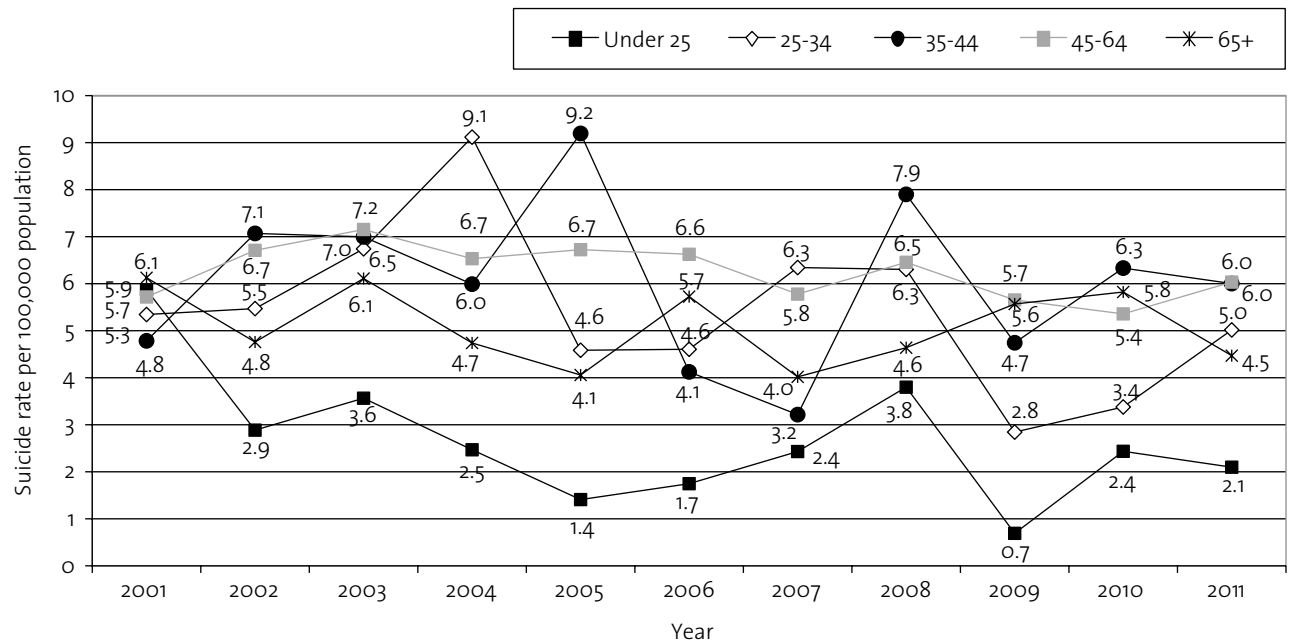


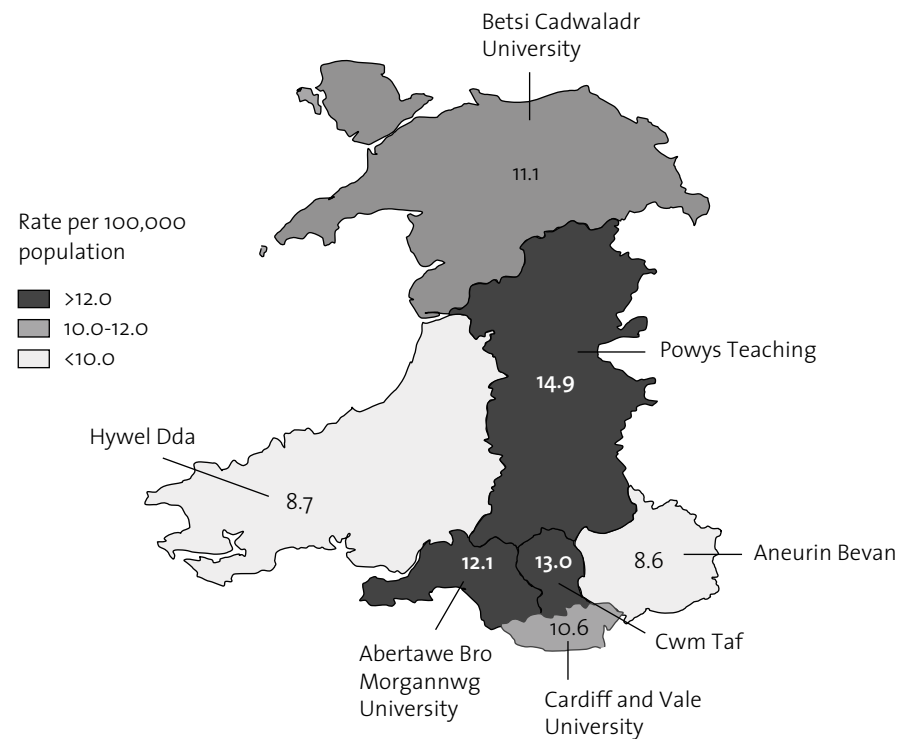
Figure 72: Rates of female suicide in the general population, by age-group



## Variation in suicide by region

- There was some variation in suicide rates by Health Board of residence at the time of death (2009-2011). The highest rate of suicide was in Powys Teaching, at 14.9 per 100,000 population, and the lowest in Aneurin Bevan at 8.6 per 100,000 population and Hywel Dda at 8.7 per 100,000 population (Figure 73).

Figure 73: Rate of suicide per 100,000 population, by Health Board of residence (average rate 2009-2011)





## Method of suicide

- The most common methods of suicide over 2001-2011 were hanging/strangulation (49%) and self-poisoning (overdose) (22%). Less frequent methods were jumping/multiple injuries (mainly jumping from a height or being struck by a train) (7%), drowning (6%), carbon monoxide (CO) poisoning (4%), firearms (3%), and cutting/stabbing (3%).
- Over the period 2001-2010 there were changes in method of suicide. Suicide deaths by hanging increased, whilst deaths by self-poisoning decreased (Figure 74). Of the less common methods, deaths by CO poisoning, drowning, and firearms decreased (Figure 75).

Figure 74: Suicide in the general population: main causes of death

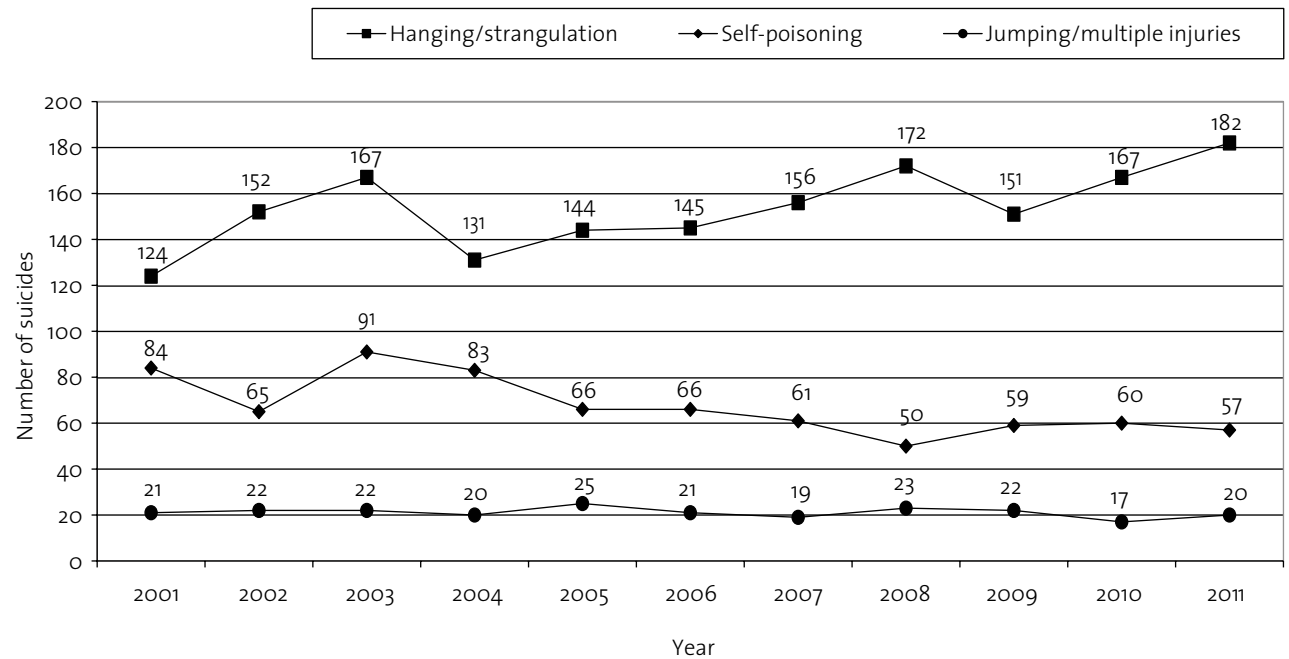
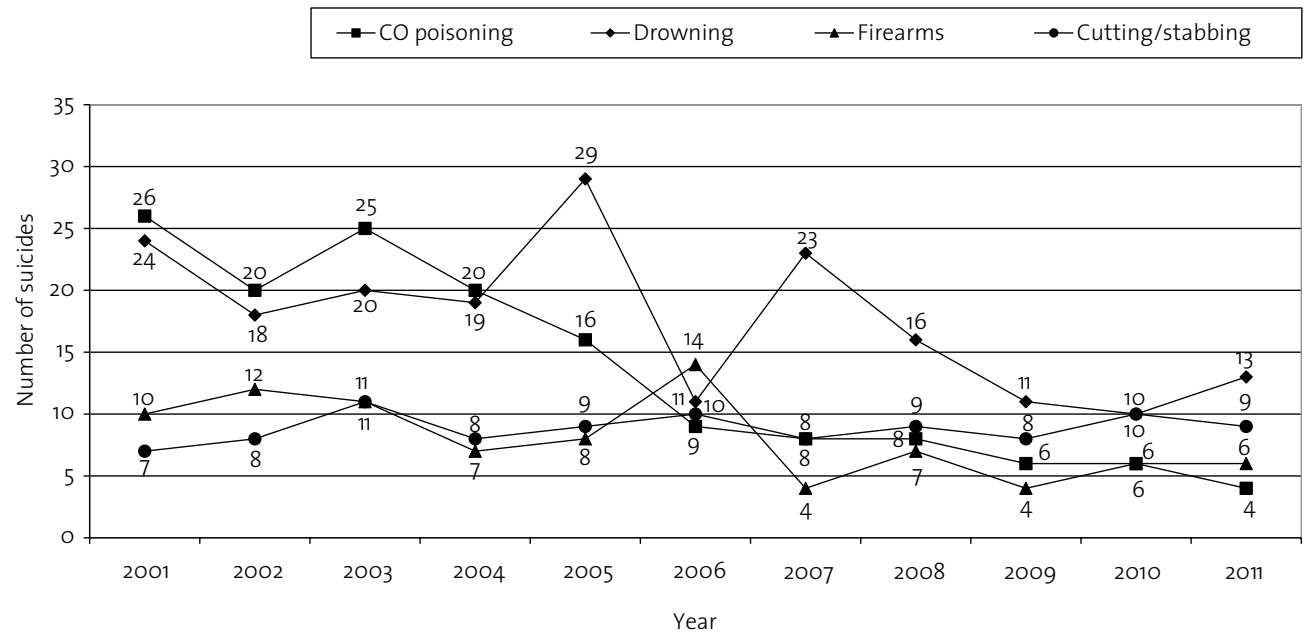


Figure 75: Suicide in the general population: other causes of death



## 4.1.2 Patient suicide

### Patient suicide: numbers and rates

- During 2001-2011, 802 suicides (23% of general population suicides) were identified as patient suicides, i.e. the person had been in contact with mental health services in the 12 months prior to death. This represented an average of 73 patient suicides per year.

- There was an overall decrease between 2001 and 2010 in the number and rate of patient suicide (using a general population denominator), although recent figures suggest an increase (Table 8; Figure 76).
- Rates fell overall for males and females but have risen in males since 2008 (Figure 76). Numbers for individual age-groups fluctuated but fell overall for those aged under 25 (Figure 77).

- 13 (2%) patient suicides were aged under 18, with no overall trend over the report period.
- In 2008-2010, 43% of patients were unemployed compared to 38% in 2001-2003. This difference is not statistically significant.

**Table 8: Number of patient suicides, by gender**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Male	63	51	54	45	59	38	49	38	49	54	58
Female	22	25	30	27	30	21	22	17	21	14	14
Total	85	76	84	72	89	59	71	55	70	68	73 <sup>†</sup>

\* projected figure

† Numbers do not tally due to rounding.



Figure 76: Rates of patient suicide, by gender

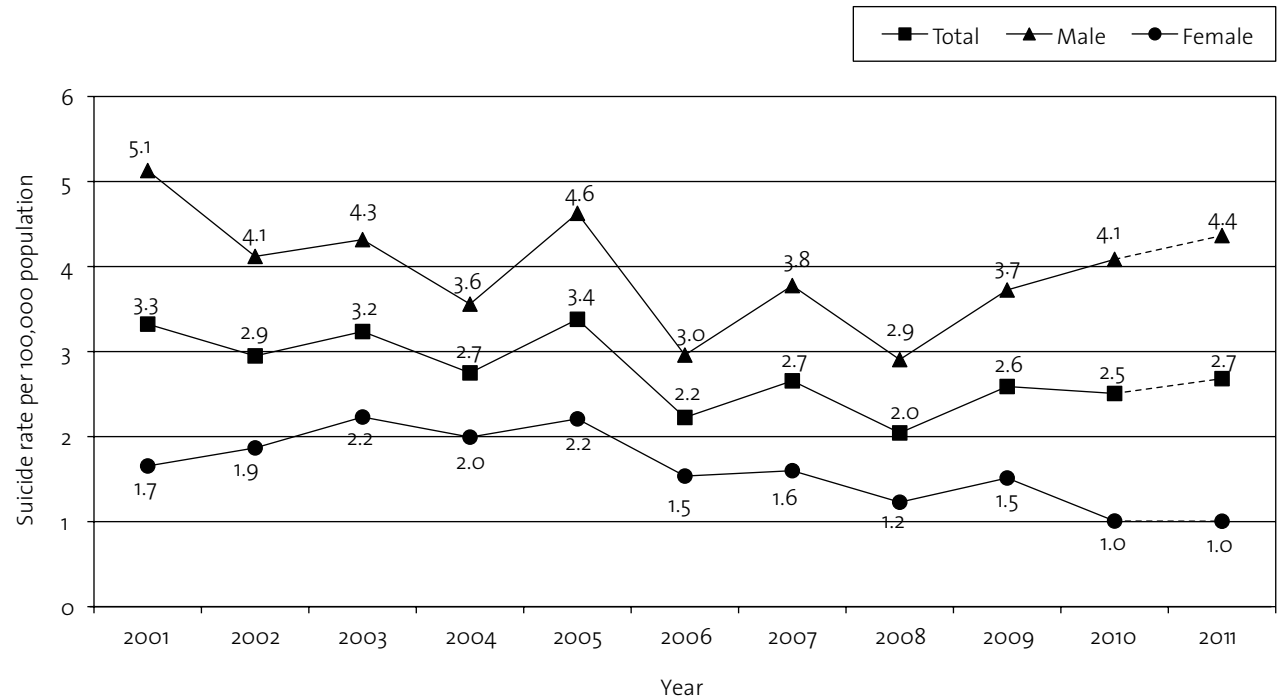
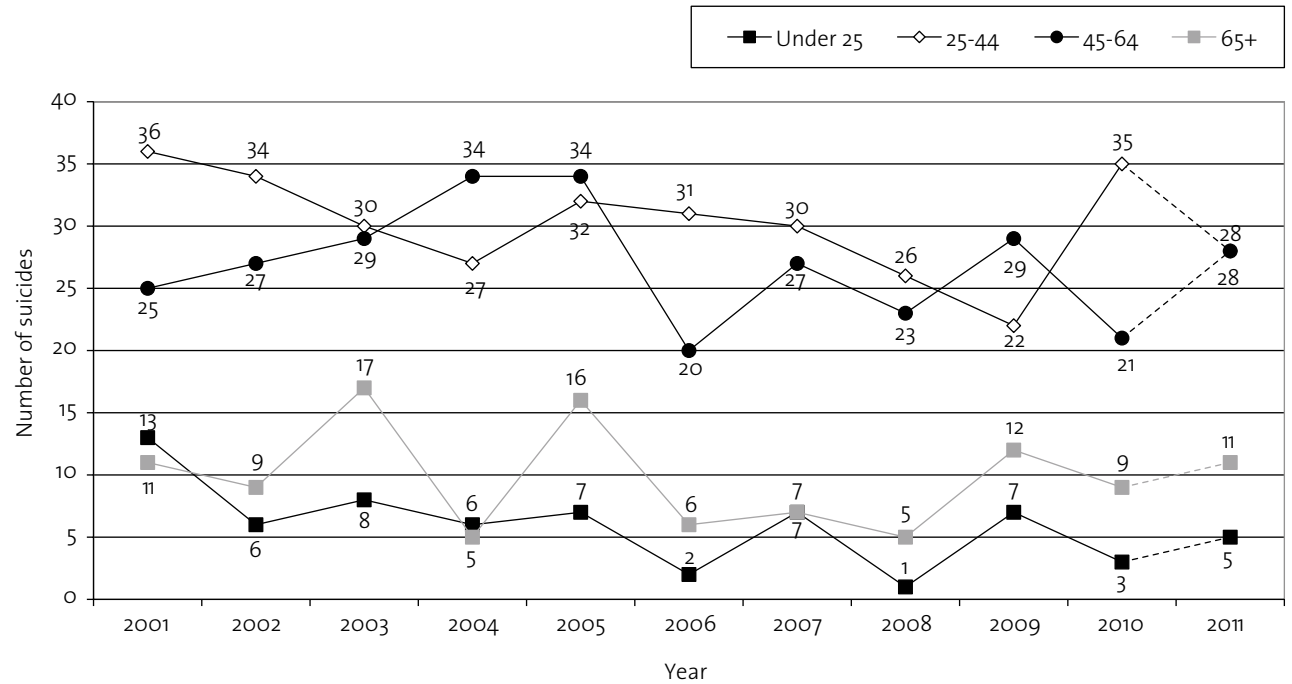


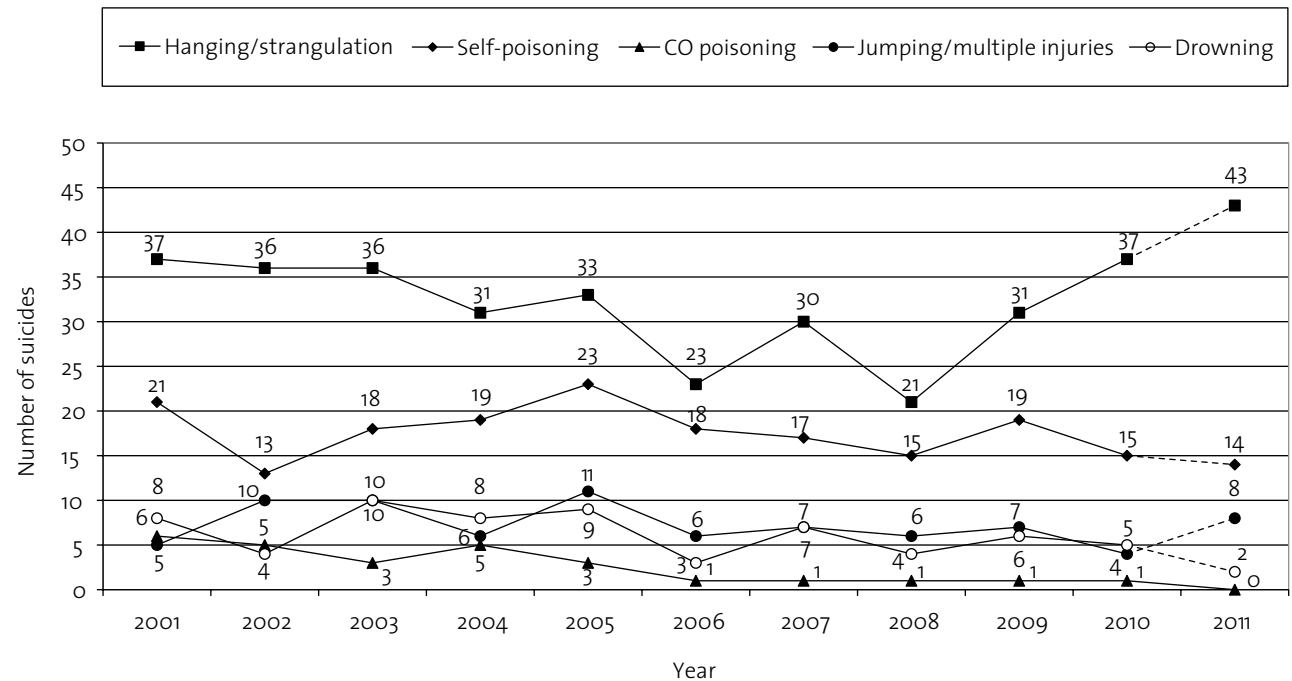
Figure 77: Number of patient suicides, by age-group



## Method of suicide by patients

- The most common methods of suicide by patients were hanging/strangulation (44%) and self-poisoning (24%).
- Suicides by hanging fell overall until 2008 but rose in 2009 and 2010, and our projection for 2011 suggests a further rise (Figure 78). Deaths by CO poisoning decreased while figures for other methods did not change between 2001-2010.
- The most common substances used in deaths by self-poisoning were opiates (21%), tricyclic antidepressants (14%) and paracetamol/opiate compounds (13%). Numbers are too small for statistical analysis but there were 6 self-poisonings with opiates in 2001-2003 and 12 in 2009-2011.

Figure 78: Patient suicide: main causes of death



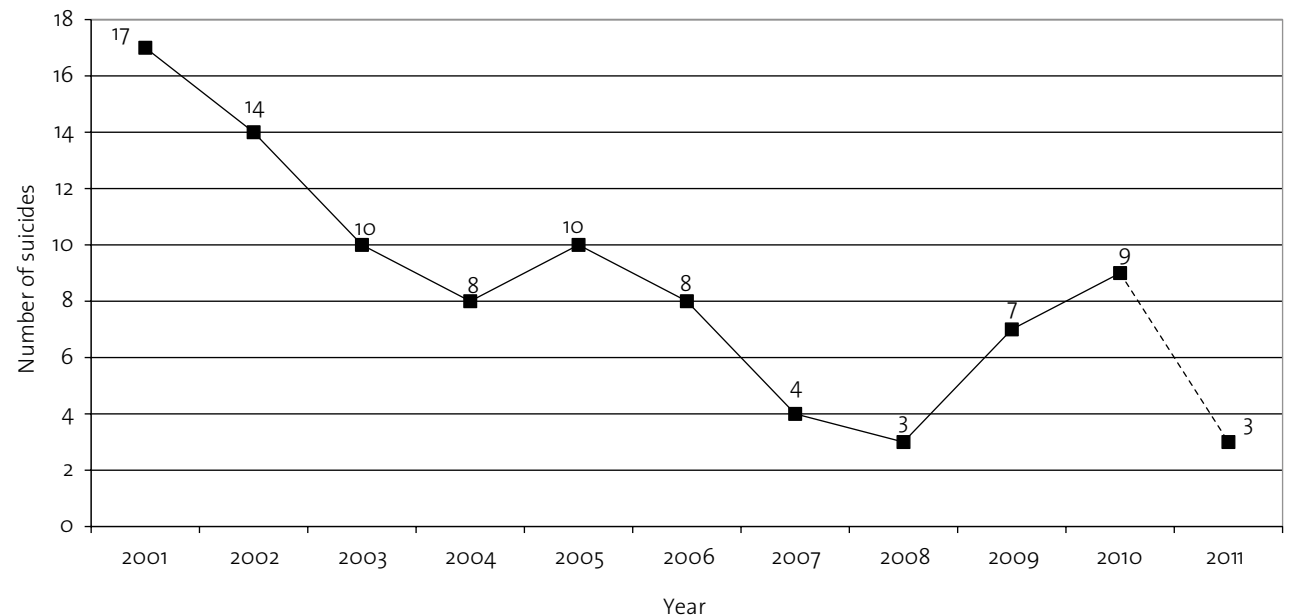
## In-patient suicide

- There were 93 in-patient deaths by suicide during the report period, 12% of patient suicides, an average of 8 deaths per year.
- There was an overall fall in the number of in-patient suicides despite a rise in 2009-2010 (Figure 79).
- There were 22 patients who died on the ward by hanging/strangulation over the 11-year period; this number fluctuated from 0 to 6 per year. The number of deaths by hanging on the ward fell between 2001-2010.
- There were 21 (23%) detained in-patients who died by suicide, an average of 2 per year, with no trend over the report period.

## Absconding

- There were 27 in-patients who died after absconding from the ward, 29% of all in-patient suicides, an average of 2 deaths per year. The number fell between 2001-2010, with only 6 deaths following absconding since 2004.

Figure 79: Patient suicide: number of mental health in-patients



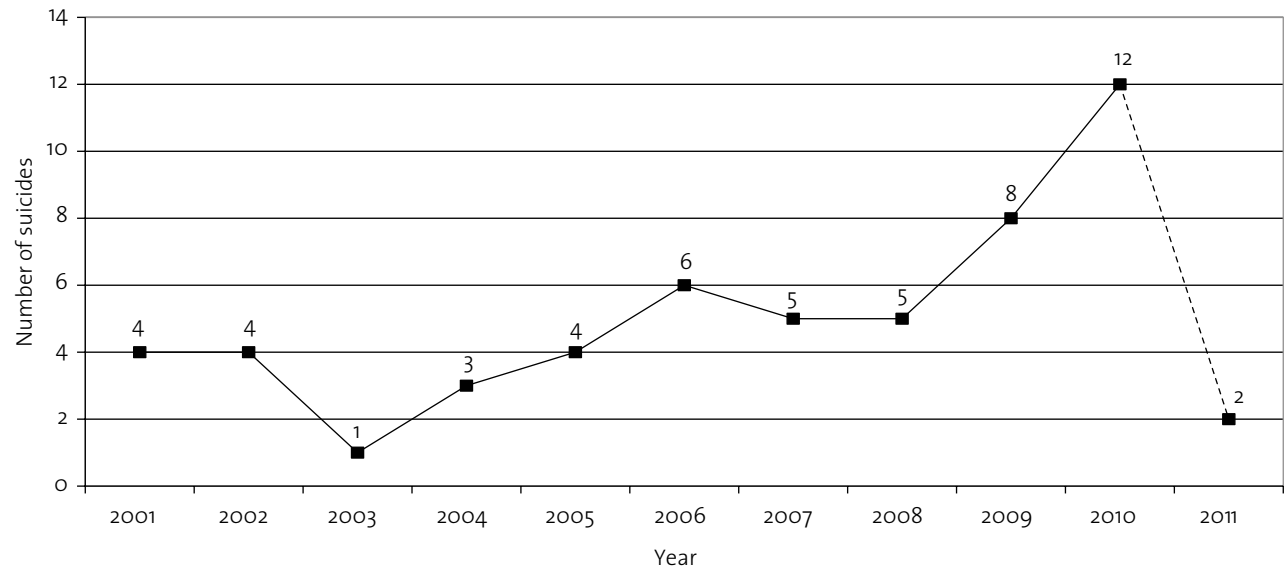
## Community Treatment Orders

- There were 4 suicide deaths among patients subject to a community treatment order (CTO) between 2009-2011, 2% of all patient suicides in this time period.
- One suicide subject to a CTO had refused drug treatment in the month before death and missed the last appointment with services.

## Crisis Resolution/Home Treatment

- There were 54 suicides who had been under crisis resolution/home treatment teams (CR/HT), 7% of the total sample, an average of 5 deaths per year.
- There was an overall increase in the number of suicides under CR/HT (Figure 8o); 20 of these deaths occurred in 2009-2010. There are now more suicides under CR/HT than in in-patient care.
- 16 (34%) CR/HT patients died within 3 months of hospital discharge, of whom 7 died within 2 weeks.
- 22 (42%) CR/HT patients lived alone; 9 (17%) refused treatment in the month before suicide.

Figure 8o: Patient suicide: number of patients under crisis resolution/home treatment services

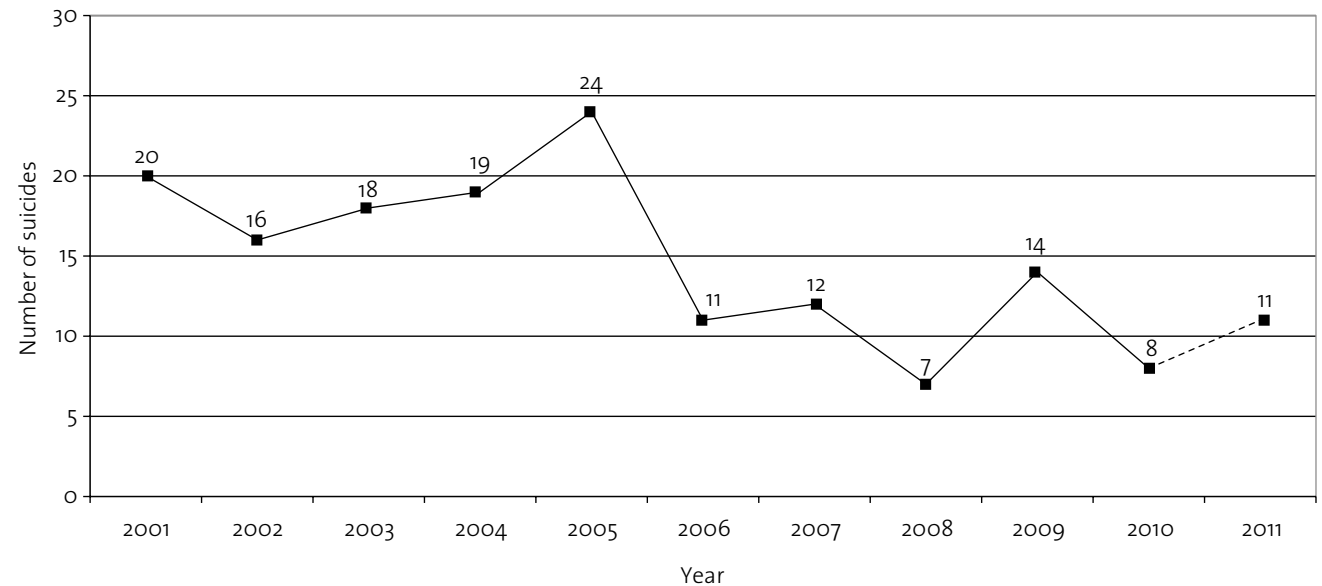




## Patients recently discharged from hospital

- There were 160 suicides within 3 months of discharge from in-patient care, 20% of all patients and 23% of suicides by community patients, an average of 15 deaths per year.
- There was an overall fall in the number of post-discharge suicides between 2001-2010, although there has been no fall since 2006 (Figure 81).
- Post-discharge suicides were most frequent in the 2 weeks after leaving hospital when 48 deaths occurred.

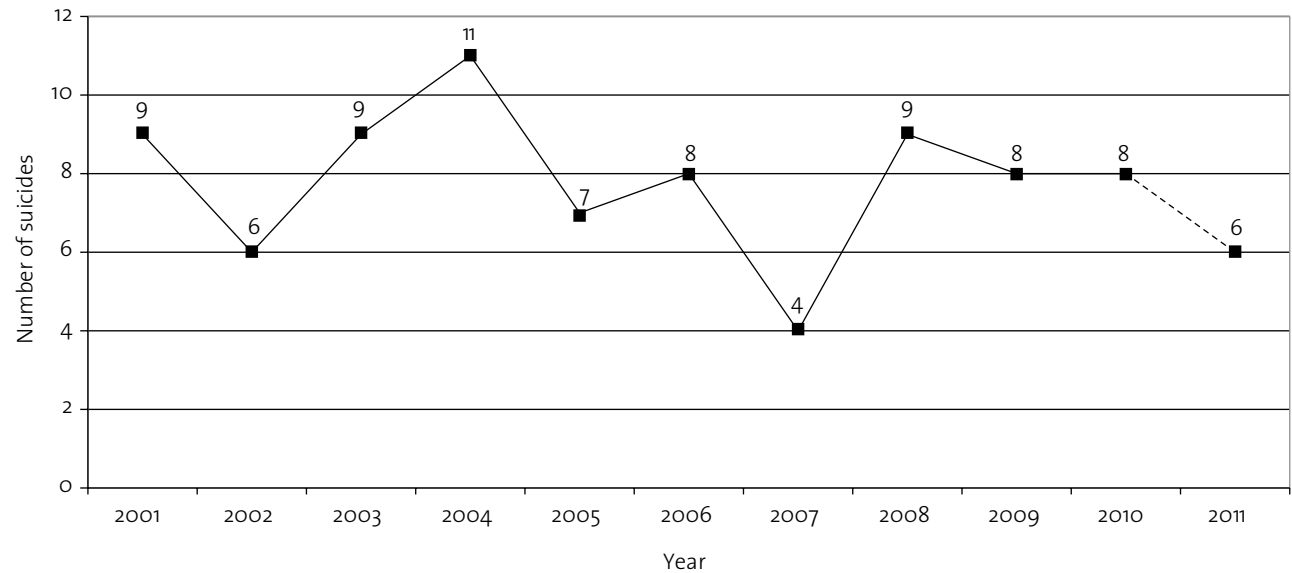
Figure 81: Patient suicide: number who died within 3 months of in-patient discharge



## Treatment refusal

- There were 85 suicides in which the patient was known to have refused drug treatment in the month before death, 12% of the total sample, an average of 8 deaths per year.
- There was no overall trend in the number of suicides in patients who refused drug treatment (Figure 82); the highest number was in 2004.

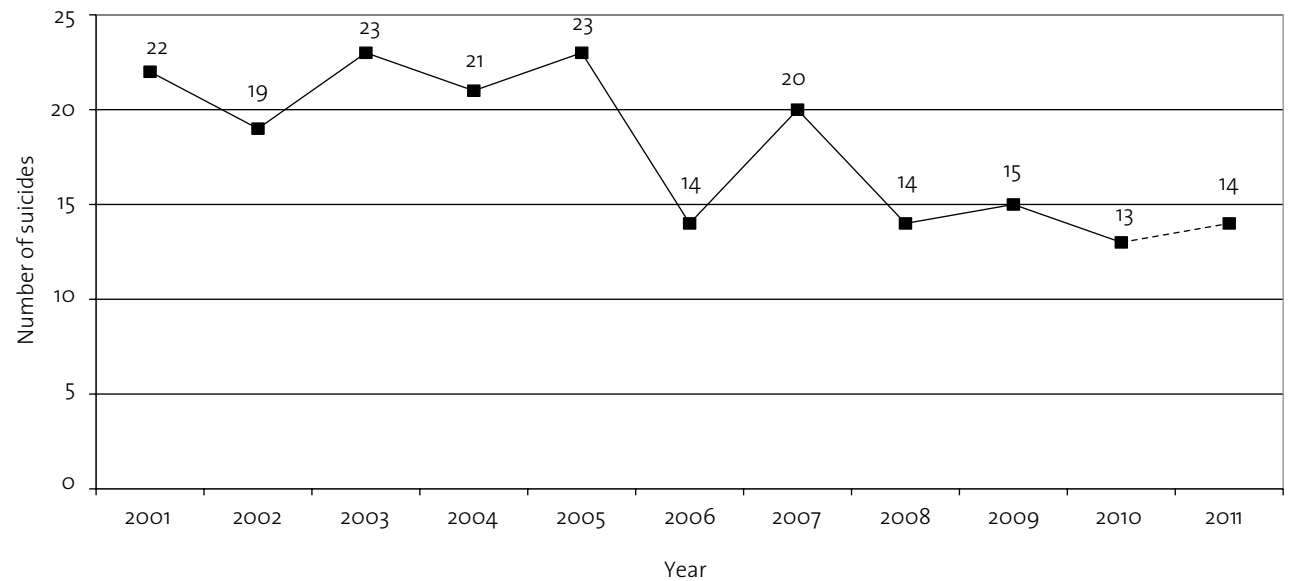
Figure 82: Patient suicide: number of patients who refused drug treatment



## Missed contact

- There were 198 suicides by people who missed their last appointment with services, 28% of the total sample, an average of 18 deaths per year.
- Over the period 2001-2010 there was a significant fall in the number of patient suicides following missed contact (Figure 83).

Figure 83: Patient suicide: number of patients who missed their last appointment with services



## Alcohol and drug misuse

- There were 380 suicides in people with a history of alcohol misuse, 48% of the total sample, an average of 35 deaths per year.
- 258 patient suicides had a history of drug misuse, 33% of the total sample, an average of 23 deaths per year.
- There were 442 patients who had a history of either alcohol or drug misuse or both, 56% of patient suicides, an average of 40 deaths per year.
- Between 2001 and 2010, the number of patient suicides with a history of alcohol or drug misuse did not change, although we project a rise in patient suicides with alcohol misuse in 2011 (Figure 84).
- 84 (11%) patient suicides had a primary diagnosis of alcohol dependence/misuse; 32 (4%) had drug dependence/misuse. The number with alcohol or drug dependence/misuse did not change over the report period.
- 117 (15%) patient suicides had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis), an average of 11 deaths per year. The number of dual diagnosis patient suicides has remained lower since a peak in 2005 (Figure 85).

Figure 84: Patient suicide: number with a history of alcohol or drug misuse

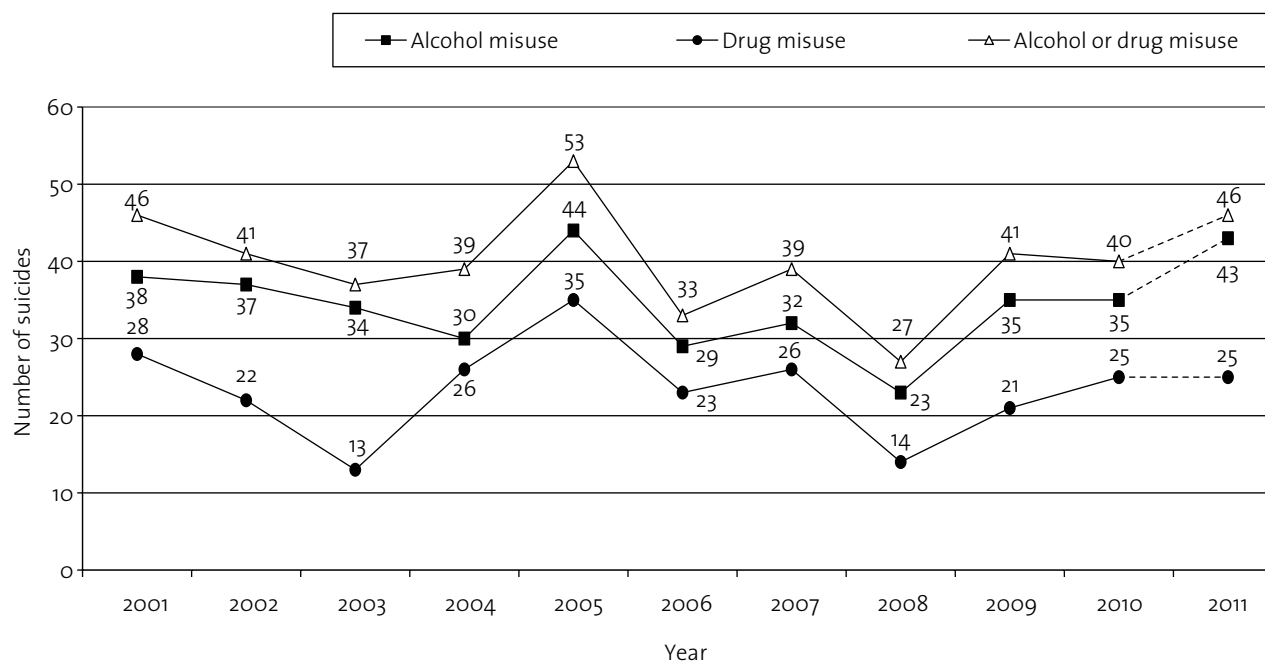
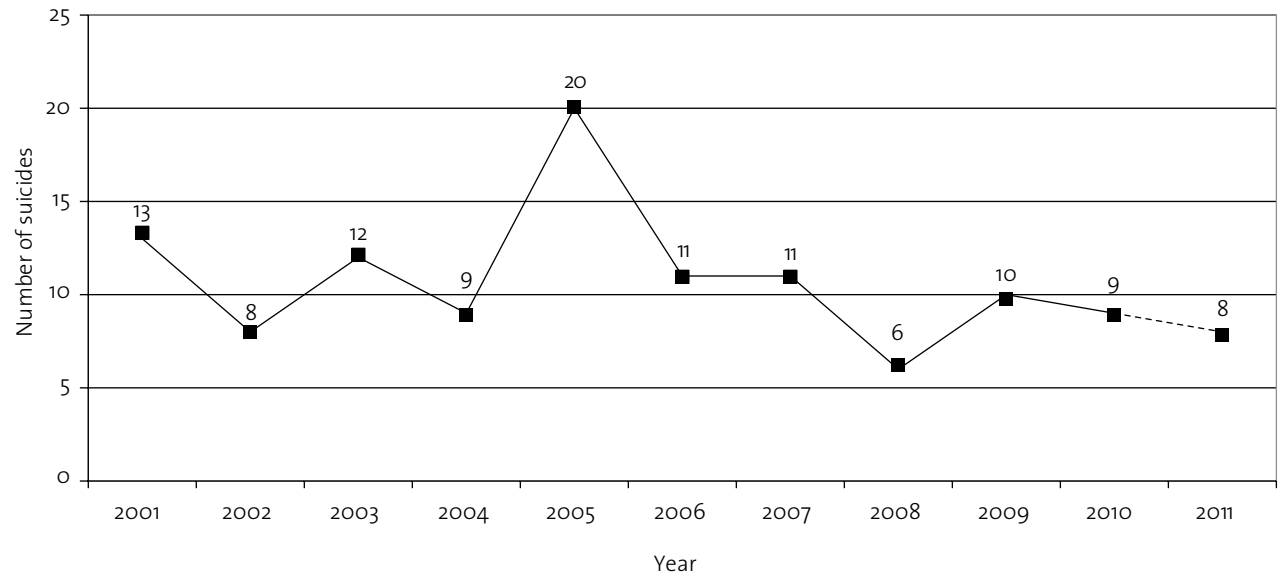


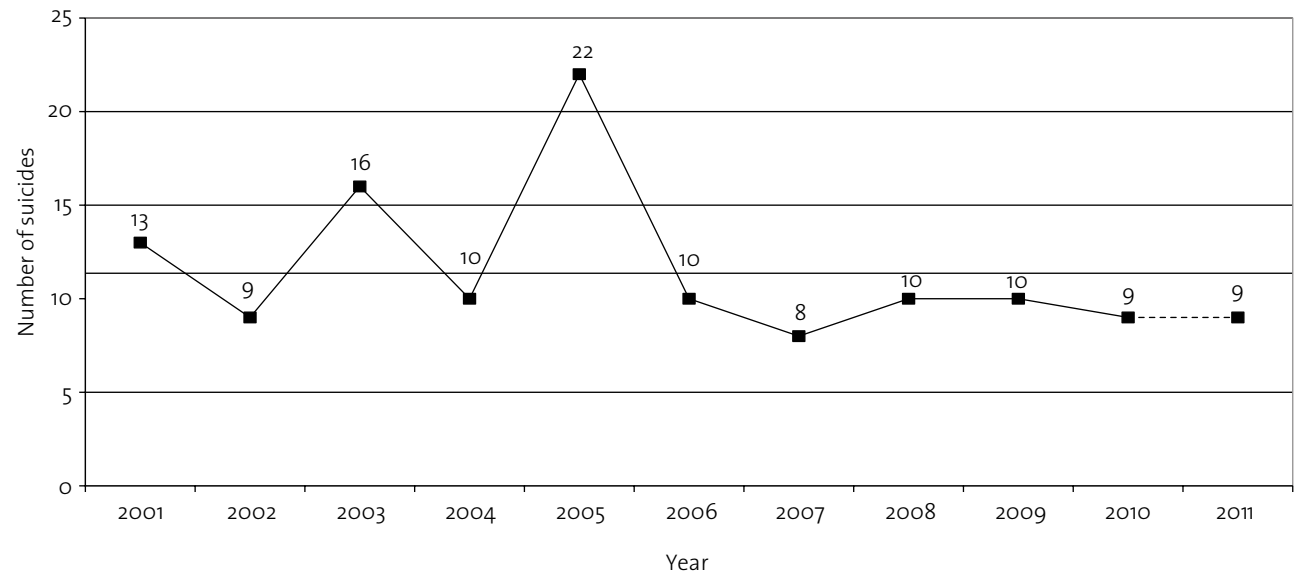
Figure 85: Patient suicide: number with dual diagnosis (severe mental illness and alcohol or drug dependence/misuse)



## Patients with schizophrenia

- There were 126 suicides by patients with a primary diagnosis of schizophrenia, 16% of the total sample, an average of 11 deaths per year.
- There was no overall trend in the number of suicides by patients with schizophrenia, although figures were generally higher up to 2005 and have been lower since a 2005 peak (Figure 86).
- There were 17 (15%) suicides by patients with schizophrenia who had refused drug treatment in the month before death.
- 27 (28%) had missed their last appointment with services.

Figure 86: Patient suicide: number of patients with a primary diagnosis of schizophrenia



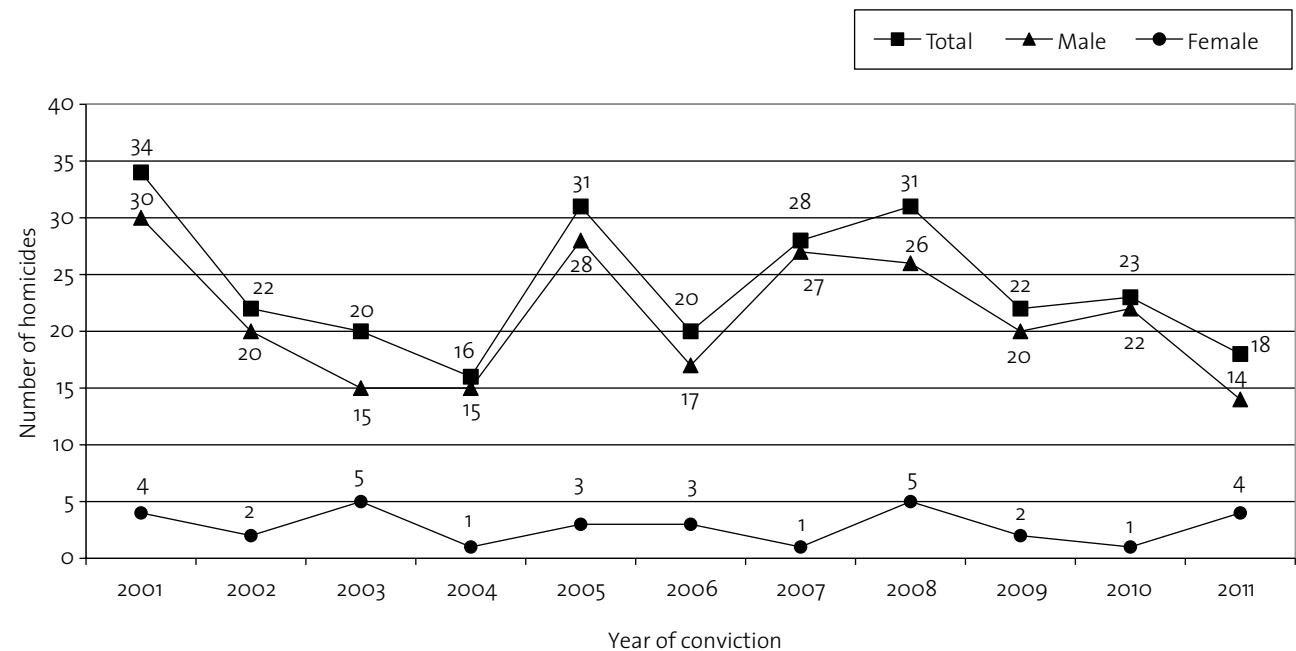
## 4.2 HOMICIDE

The Inquiry was notified by Home Office Statistics of 265 homicide convictions in the report period 2001-2011. A psychiatric report was obtained on 108 (41%) homicide perpetrators.

### 4.2.1 Homicide in the general population

- The number of homicide convictions in the general population is shown in Figure 87. These figures are provided as context for our data on homicides by people with mental illness. More recent data are published for England and Wales by the Office for National Statistics.<sup>3</sup>
- There was no overall trend in the number of homicide convictions over the report period.
- The most common method of homicide was the use of a sharp instrument (36% of the total sample).
- The relationship of victim to perpetrator was: acquaintance (107, 46%); spouse/partner (including ex spouse/partner) (60, 26%); stranger (38, 16%); and other family member (30, 13%).

Figure 87: Number of homicide convictions in the general population, by gender of perpetrator



## 4.2.2 Homicide by mentally ill people in the general population

### Perpetrators who had symptoms of mental illness at the time of the homicide

- 30 people had an abnormal mental state at the time of the homicide, 11% of the total sample, an average of 3 per year, ranging between 1 and 4 annually.
- 19, 7% of the total sample, had symptoms of psychosis at the time of the offence, an average of 2 per year, ranging between 0 and 4 annually.

## 4.2.3 Patient homicide

- During 2001-2011, 29 people convicted of homicide, 11% of the total sample, were identified as patients, i.e. the person had been in contact with mental health services in the 12 months prior to the offence, an average of 3 per year, ranging between 1 and 5 annually.
- The number of cases fluctuated. In this section the numbers were too small to examine trends over time.
- No patients were subject to a community treatment order (CTO) at the time of last discharge or at the time of the homicide.

### Relationship of victim to perpetrator: patient homicide

- Victims were most commonly an acquaintance (13, 46%), followed by a spouse/partner (including ex spouse/partner) (7, 25%), family member (6, 21%), and stranger (2, 7%).

## Treatment refusal

- 5 patients (20%) were known to have refused drug treatment in the month before the homicide.

## Missed contact

- 9 patients (31%) missed their last appointment with services before the homicide.

## Crisis Resolution/Home Treatment

- 1 patient was under crisis resolution/home treatment care (CR/HT) at the time of the homicide.





## Alcohol and drug misuse

- 17 patients had a history of alcohol misuse, 71% of the patient sample, ranging between 0 and 4 annually.
- 20 patients had a history of drug misuse, 74% of the patient sample, ranging between 1 and 4 annually.
- There were 23 patients who had a history of either alcohol or drug misuse or both, 85% of patients, an average of 2 homicides per year.
- 3 (11%) patients had a primary diagnosis of alcohol dependence/misuse; 2 (7%) had drug dependence/misuse.
- 6 (21%) patients had severe mental illness and co-morbid alcohol or drug dependence/misuse (dual diagnosis).

## Homicide and schizophrenia

- There were 18 homicides by people with schizophrenia (based on lifetime history), 7% of the total sample, an average of 2 homicides annually.
- 9 (50%) people with schizophrenia were patients, ranging between 0 and 2 annually.
- 3 patients with schizophrenia were known to have refused drug treatment in the month before the homicide.
- 3 patients with schizophrenia missed their last appointment with services before the homicide.

## 4.3 SUDDEN UNEXPLAINED DEATH IN MENTAL HEALTH IN-PATIENTS (SUD)

- There were 29 deaths meeting criteria for SUD over the report period, an average of 3 per year. Numbers fluctuated between 1 and 6 and there was no trend.
- No patients were from a black and minority ethnic (BME) group.
- There was one death within one hour of restraint reported in 2006. We do not know whether restraint caused this death.
- 4 (14%) were aged under 45.
- 11 (39%) had a history of cardiovascular disease; 8 (29%) had a history of respiratory disease; 5 (18%) had a history of cerebrovascular disease, and 1 (4%) had a history of epilepsy.
- 2 (7%) were receiving 2 or more antipsychotic drugs (i.e. polypharmacy).



## UK COMPARISONS

### 5.1 SUICIDE

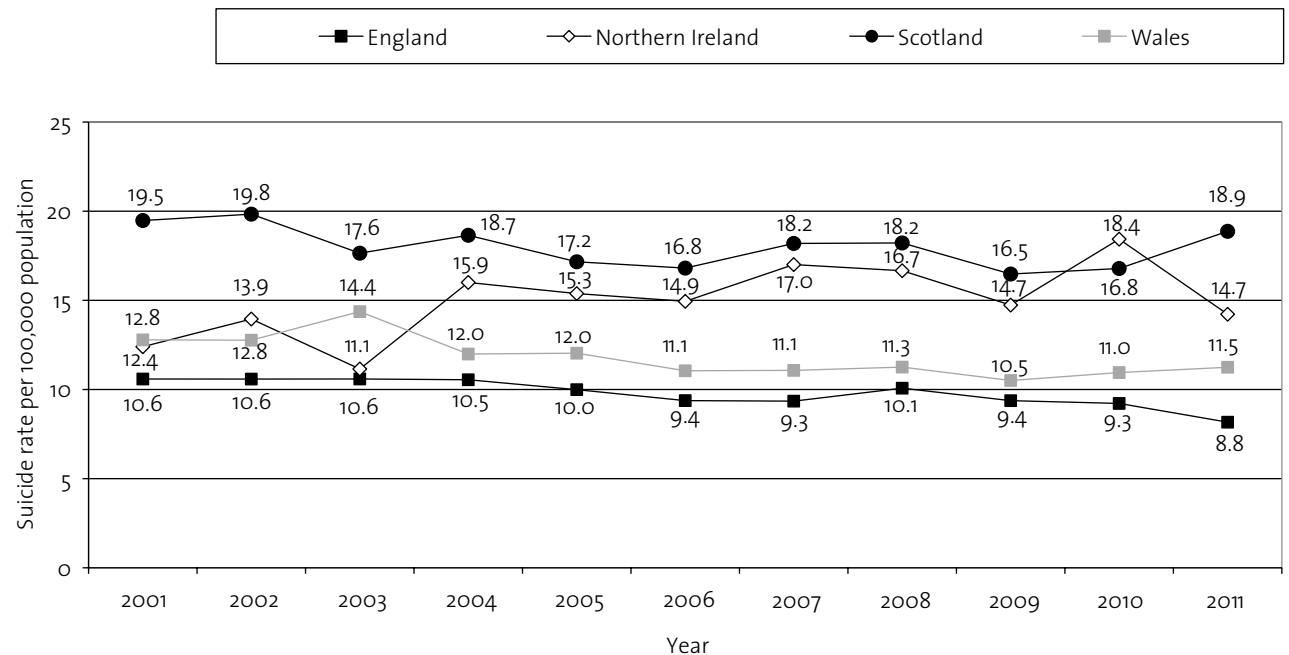
#### Rates

- Scotland and Northern Ireland continue to have the highest general population suicide rates (Figure 88).
- Differences in rates between countries over the report period were greatest in the youngest age-groups. Rates in Scotland were highest in all age-groups from 20-24 to 80-84 (Figure 89).
- Patterns in age and gender groups varied by country.

#### Male rates:

- fell in those aged under 25 and 25-34 in England, Scotland, and Wales
- rose in those aged 45-64 in England and Northern Ireland
- fell in those aged 65 and older in England and Scotland.

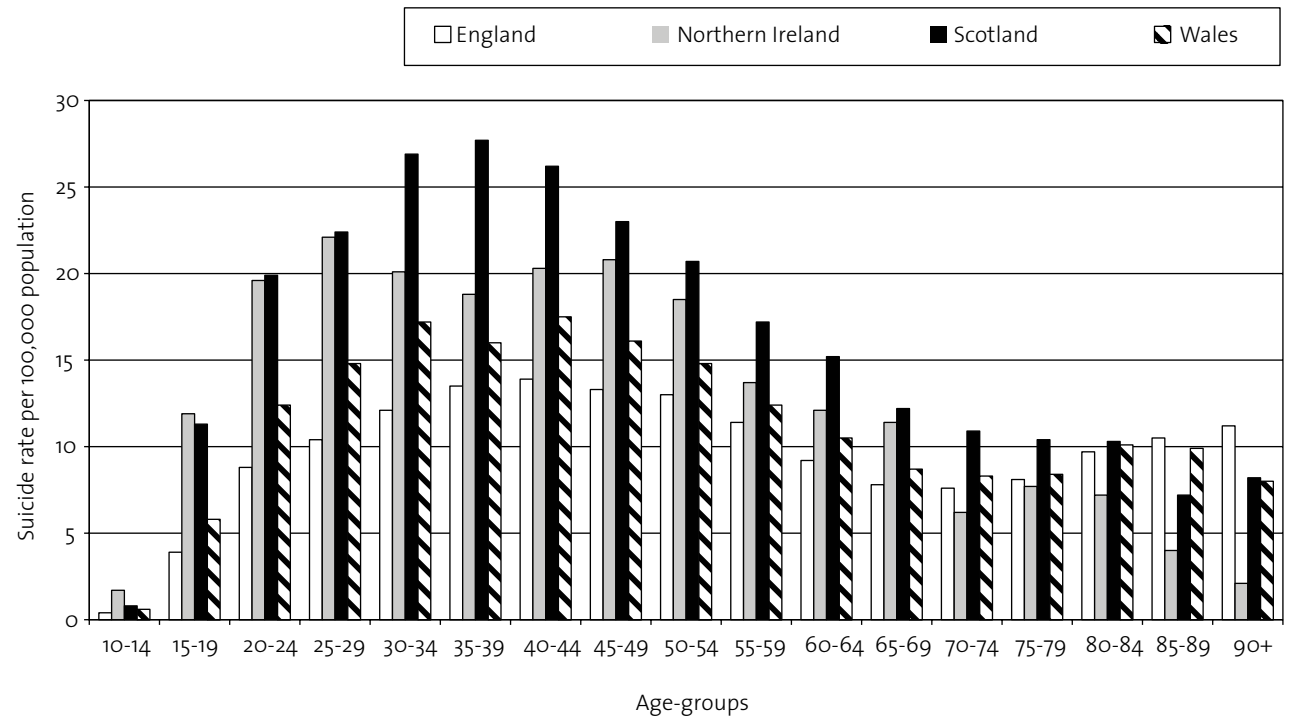
Figure 88: Suicide rates in the general population, by UK country



### Female rates:

- fell in those aged under 25 in Scotland and Wales
- rose in those aged 35-44 in Northern Ireland
- fell in those aged 65 and older in England and Scotland.

Figure 89: Suicide rates in the general population, by age-group and UK country (2001-2011)



## Method

- The number and proportion of hangings in the general population increased in all countries over the report period 2001-2010, although numbers fell in 2011 in England and Northern Ireland (Table 9).
- Between 2001 and 2010, the number of patient suicides by hanging increased in England and Northern Ireland and was stable in Wales and Scotland (Table 10).
- Patient suicides by self-poisoning using opiates increased in Scotland in 2011 due to the coding change in cause of death (Figure 90). The projected rise in opiate deaths in England may also be a re-coding effect.

**Table 9: Suicides in the general population by hanging, by UK country**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
England	1659	1827	1776	1927	1922	1800	1986	2292	2024	2101	1990
N. Ireland	96	103	85	118	130	116	149	161	145	175	140
Scotland	283	306	267	325	259	285	291	339	327	328	329
Wales	124	152	167	131	144	145	156	172	151	167	182

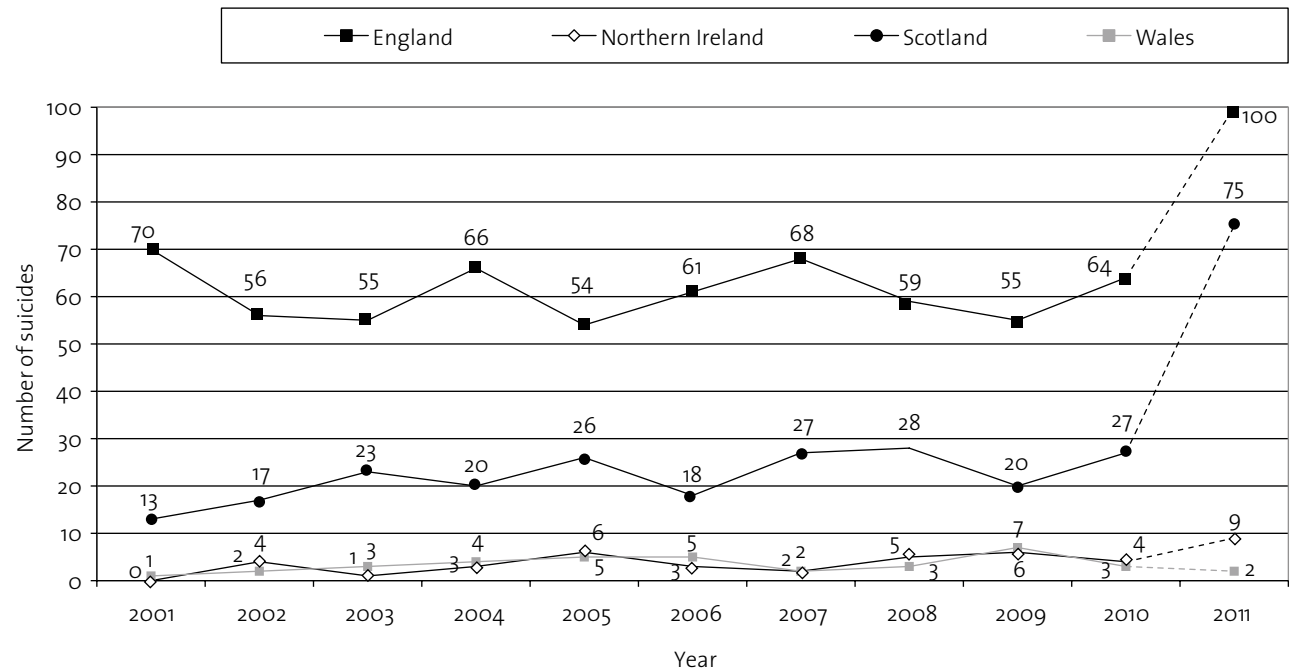
**Table 10: Patient suicide: number of suicides by hanging, by UK country**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
England	433	456	456	515	487	456	472	535	437	526	569
N. Ireland	26	26	23	30	36	32	39	38	35	34	31
Scotland	84	92	79	88	67	61	103	87	85	80	86
Wales	37	36	36	31	33	23	30	21	31	37	43

\* projected figure



Figure 90: Patient suicide: number of patients who died by self-poisoning using opiates, by UK country



## 5.2 HOMICIDE

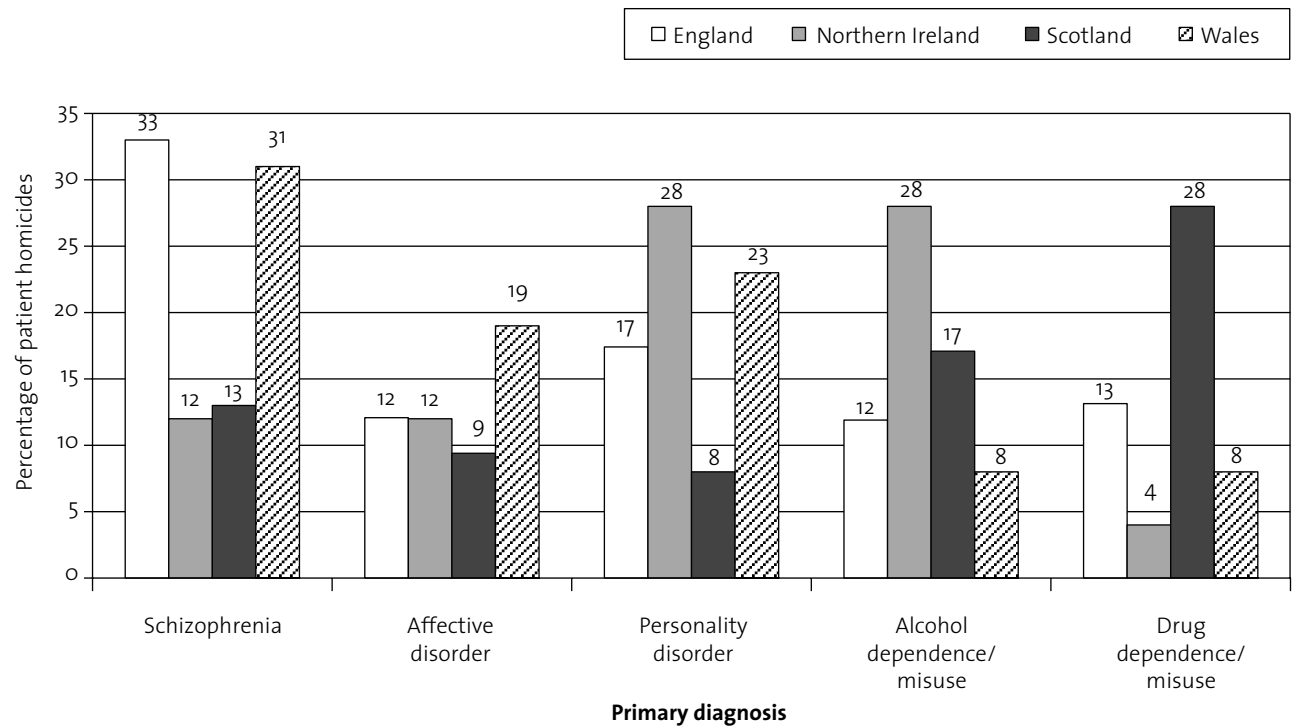
### Homicide by people with mental illness

The contribution of mental illness to homicide figures can be calculated in different ways. Figures in Table 11 are presented for mental health patients and people with mental illness, for the UK as a whole and for each UK country. The number of victims by patients or people with mental illness is presented in Table 12. All are based on convictions and are presented by year of conviction. Figures are for 2001-2010.

### Patient homicide

- Patient homicide refers to perpetrators in contact with mental health services within 12 months of the offence.
- The average number of patients committing homicide per year in the UK (2001-2010) was 74 (Table 11).
- The primary diagnoses for patient homicide are presented by country in Figure 91. Many patients did not have severe mental illness and had a primary diagnosis of personality disorder or drug/alcohol misuse.

Figure 91: Primary diagnosis in patient homicide, by UK country (2001-2010)



## Perpetrators who had symptoms of mental illness at the time of the homicide

- People who experienced symptoms of hypomania, depression, delusions, hallucinations, or other psychotic symptoms (e.g. passivity, thought insertion) of all severity, were defined as mentally ill at the time of the offence.
- Although symptoms were present, we do not know if these symptoms led directly to the homicide.
- On average, 67 people per year committed homicide whilst experiencing an abnormal mental state (Table 11).
- Most of these people were not under mental health care; therefore most were not preventable by mental health services.
- These cases provide an indication of the total “contribution” to homicide from mental illness.

## Combined definition

- Table 11 shows the number of homicide by either patients or people who were mentally ill at the time of the offence.
- In the UK, on average 115 patients or people experiencing symptoms of mental illness committed homicide per year (Table 11).
- There was limited overlap between these two groups. Combined UK figures show 35% patients were mentally ill at the time of offence; 38% of those who were mentally ill at the time of offence were patients.



**Table 11: Number of homicides by patients or people who had symptoms of mental illness at the time of the offence by UK country**

**Patients**

Year of conviction	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average per year
England	55	44	70	64	72	74	53	66	38	33	569	57
Northern Ireland	3	3	4	4	1	2	2	2	3	1	25	3
Scotland	9	8	12	18	14	10	8	16	17	5	117	12
Wales	4	3	1	1	5	4	3	2	3	1	27	3
UK	71	58	87	87	92	90	66	86	61	40	738	74

**Perpetrators with symptoms of mental illness at the time of the offence**

Year of conviction	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average per year
England	54	59	75	79	66	51	48	57	48	36	573	57
Northern Ireland	2	0	1	4	1	0	3	2	1	1	15	2
Scotland	4	6	5	8	4	4	4	7	5	3	50	5
Wales	4	3	2	4	4	3	2	1	3	2	28	3
UK	64	68	83	95	75	58	57	67	57	42	666	67

**Combined definition**

Year of conviction	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average per year
England	91	83	113	118	108	103	81	93	71	58	919	92
Northern Ireland	5	3	4	6	1	2	4	4	3	2	34	3
Scotland	13	11	16	23	16	13	11	19	22	6	150	15
Wales	6	5	2	4	8	7	4	3	4	3	46	5
UK	115	102	135	151	133	125	100	119	100	69	1149	115





## Victims of homicide by patients or perpetrators with symptoms of mental illness at the time of the offence

- Our figures are about prevention of homicide by people in contact with mental health services, and therefore focus on perpetrators rather than victims.
- However, Table 12 shows the number of victims of either patients or people with mental illness at the time of the offence who were convicted of homicide.
- Over the period 2001-2010, there were on average 123 victims of homicide by people with mental illness per year in the UK.

**Table 12: Number of homicide victims of patients or people with mental illness at the time of the offence by UK country**

Year of conviction	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
England	95	87	122	125	110	113	83	101	77	72	985	99
Northern Ireland	5	3	4	7	1	2	4	4	3	2	35	4
Scotland	13	11	17	25	16	13	11	19	22	9	156	16
Wales	7	5	2	6	8	7	5	3	4	3	50	5
UK	120	106	145	163	135	135	103	127	106	86	1226	123



## Homicide followed by suicide

- Numbers for homicide followed by suicide are presented for England and Wales only. We only include cases where the suicide occurred within 3 days of the homicide. In these cases there was no conviction for homicide. Numbers are presented by year of offence.

- Table 13 shows the number of homicide-suicide incidents and the number committed by patients between 2001 and 2010.
- As these perpetrators did not undergo a psychiatric assessment after the offence, we do not have information regarding symptoms of mental illness at the time of the offence. Therefore, these cases can not be added to other perpetrators with mental illness at the time of the homicide.

- Few homicide-suicide cases involved patients under the care of mental health services prior to the offence.

**Table 13: Number of homicide-suicide perpetrators, patients and patient victims in England and Wales, by year of offence**

Year of offence	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
Homicide-suicide perpetrators	19	16	19	16	19	21	24	19	21	15	189	19
Homicide-suicide patients	0	1	3	2	1	0	3	1	0	0	11	1
Number of victims killed by homicide-suicide patients	0	1	3	2	2	0	3	1	0	0	12	1



## 6. RECENT PUBLICATIONS FROM THE INQUIRY

A full list of Inquiry reports and publications can be found on the Inquiry website:

[www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci/publications/](http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci/publications/)

Kapur N, Cooper J, O'Connor R, Hawton K. Non-suicidal self-injury v. attempted suicide: new diagnosis or false dichotomy? *British Journal of Psychiatry* (2013) 202: 326-328.

Bickley H, Hunt IM, Windfuhr K, Shaw J, Appleby L, Kapur N. Suicide within two weeks of discharge from psychiatric in-patient care: a case-control study. *Psychiatric Services* (2013) DOI: 10.1176/appi.ps.201200026.

Clements C, Morriss R, Jones S, Peters S, Roberts C, Kapur N. Suicide in bipolar disorder in a national English sample, 1996-2009: frequency, trends and characteristics. *Psychological Medicine* (2013) DOI:10.1017/S0033291713000329.

Flynn SM, Shaw JJ, Abel KM. Filicide: Mental illness in those who kill their children. *Plos One* (2013) 8(4): e58981. DOI:10.1371/journal.pone.0058981.

Mok P, Kapur N, Windfuhr K, Leyland A, Appleby L, Platt S, Webb R. Trends in national suicide rates for Scotland and for England and Wales, 1960-2008. *British Journal of Psychiatry* (2012) DOI: 10.1192/bjp.bp.111.092908.

Mok P, Leyland A, Kapur N, Windfuhr K, Appleby L, Platt S, Webb R. Why does Scotland have a higher suicide rate than England? An area-level investigation of health and social factors. *Journal of Epidemiology and Community Health* (2012) DOI: 10.1136/jech-2011-200855.

Overshott R, Rodway C, Roscoe A, Flynn S, Hunt IM, Swinson N, Appleby L, Shaw J. Homicide perpetrated by older people. *International Journal of Geriatric Psychiatry* (2012) DOI: 10.1002/gps.2739.



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