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NATIONAL CONFIDENTIAL INQUIRY
INTO SUICIDE AND HOMICIDE
BY PEOPLE WITH MENTAL ILLNESS

ANNUAL REPORT: England and Wales

JULY 2009

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PRESENTATION OF FINDINGS

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

- Suicide
- Homicide
- Sudden unexplained deaths.

How data are collected for these core areas of the Inquiry's research programme can be found on our website (<http://www.manchester.ac.uk/nci/methodology>) and in the Inquiry's 2006 report *Avoidable Deaths* (1), also available online (<http://www.manchester.ac.uk/nci/reports>).

This report covers the period January 1997 to December 2006 for suicide, and January 1997 to December 2005 for homicide. It focuses on trends in the data over this time.

The Inquiry was notified of 50,352 deaths in the general population that received a coroner's verdict of suicide or open verdict. The verdicts were notified to the Inquiry from the Office for National Statistics (2). The Inquiry was also notified by the Home Office (3) of 5,189 person's convicted of homicide offences (murder, manslaughter, infanticide hereafter referred to as 'homicides'), or found unfit to plead to/guilty by reason of insanity of such offences in the report period. Of these cases, 13,066 suicides (26%) and 510 homicides (10%) were identified as patient

suicides and homicides, i.e. the person had been in contact with mental health services in the 12 months prior to death or prior to committing the homicide. A psychiatric report was obtained on 2,605 (50%) homicide perpetrators.

Data completeness for patient suicide and homicide was high overall (97%) in the report period. However, in the most recent years completeness was 89% for suicide and 82% for homicide due to delays in the notification procedures. For sudden unexplained death (SUD) completeness is high (98-100% over the years reported). In the final year of the longitudinal analyses, both the actual number of reported cases and the projected number of cases are presented.

Projected figures for suicide are based on the average annual return of Inquiry questionnaires. For homicide, projected figures are calculated on the average annual Inquiry questionnaire return and the number of court reports obtained in previous years. For sudden unexplained death, projected figures are lower than the number of cases at the time of publication because some patient deaths currently satisfying the SUD eligibility criteria are likely to be excluded from the study following case validation.



General population and patient rates for suicide and homicide are calculated using population estimates (aged 10 or over) obtained from ONS. Discrepancies may arise between Inquiry national rates and those presented by ONS and the National Institute for Mental Health (NIMHE) (4) due to differences in measurement described in Avoidable Deaths (1). The Mental Health Minimum Dataset (MHMDS) (5) was used to ascertain contact with NHS mental health services in England. Rates of suicide (for England only) were calculated for the years that currently overlap with Inquiry data (2004-2006) (see Section 2.2, Figure 12). During this period there was an average of 1,138,369 people in contact with NHS mental health services in England. Numbers of SUD cases refer to England and Wales. Rates of SUD are presented for England only based on NHS Hospital Episode Statistics (6) for mental health and learning disabilities admissions for patients under 75 years. Due to differences in measurement, the general population homicide numbers and rates presented in this report are not comparable with those published annually by the Home Office in its homicide chapter or by the Ministry of Justice in its criminal statistics publication. The homicide rate reported here is based on perpetrators convicted of homicide and those found unfit to plead or found guilty by reason of insanity, rather than the number of victims or

number of homicide convictions. Data are also presented by year of court outcome rather than year the offence was recorded or year the offence was committed.

The Inquiry database is not static. Changes in annual figures will occur if coroners' verdicts or court outcomes change.



1. CURRENT ISSUES

This section of the Annual Report explores Inquiry data on topical issues related to patient treatment and care. In this report:

- Suicide and homicide by in-patients who have absconded from hospital
- Ligatures and ligature points used in in-patient suicides
- Suicide and homicide following disengagement from services
- Suicide by patients with eating disorders

1.1 Suicide and homicide by patients who have absconded¹ from hospital

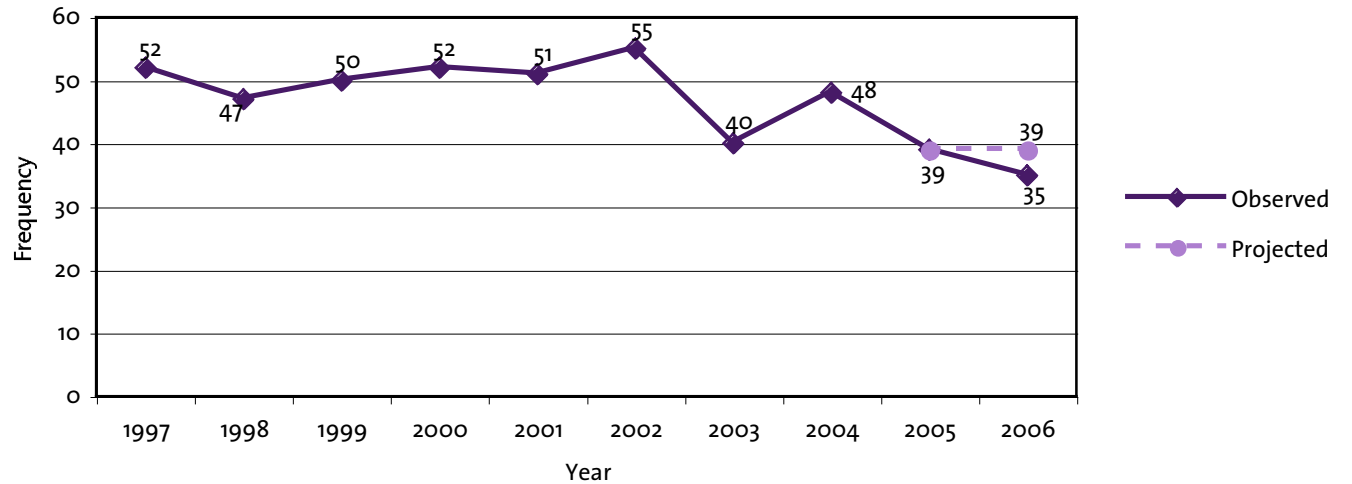
There has been recent interest in the risk posed by patients who escape or abscond from secure mental health units.

Suicide

- In the years 1997-2006, there were 1,851 (14%) suicides by in-patients, 1,292 (70%) of which occurred off the ward.
- 469 of these patients died after absconding from the ward, 25% of all in-patient suicides, and 38% of those that occurred off the ward.

¹The term absconding describes incidents in which in-patients are off the ward without staff agreement, or do not return from leave at the agreed time.

FIGURE 1 : Suicides after absconding



- The number of suicides after absconding has fallen (Figure 1) in line with the fall in the total number of in-patient suicides. The proportion of patients who absconded shows no clear pattern over the report period but has fluctuated from 44% (55 cases) in 2002 to 32% (40 cases) in 2003.
- 331 (71%) were informal patients, while 136 (29%) were detained under the Mental Health Act.
- The majority (393 cases, 86%) absconded from a general psychiatry open ward. 5 (1%) absconded from a secure unit.
- Of those who had been detained, 9 absconded within the first week of admission.

Homicide

- In the years 1997-2005, there were 21 homicides by in-patients, of which 17 occurred off the ward. One (5%) occurred in the hospital grounds.
- Of the 17 homicides occurring off the ward, there were 7 cases (41%) of absconding.
- Of the 7 patients who absconded from in-patient care, 1 (14%) had informal/voluntary status, while 6 were detained.
- 6 (86%) were on a general psychiatric ward, 1 (14%) was on a psychiatric intensive care ward. None was on a secure unit.
- 2 committed homicide within 1 week of admission, 1 offence occurred 8 days after admission and 1 occurred 20 days after admission (3 unknown).

Conclusion

Fatal incidents following absconding from secure units are rare. A more common event is the suicide of a detained patient following absconding from an open ward. Measures to prevent absconding from general wards include improvements to the ward environment and greater supervision and control of exits.



1.2 Ligatures and ligature points used in in-patient suicides

Hanging/self-strangulation remains the most common method of suicide among in-patients.

- There were 546 suicides on the ward during 1997-2006, of which 417 (76%) occurred by hanging, self-strangulation or asphyxiation.
- The most common ligature points were doors and windows. The number of hangings from hooks or door/window handles has decreased over the past few years (Table 1).
- The most common ligatures were belts, shoelaces and sheets or towels. The use of belts as ligatures has fallen substantially during the study period (Figure 2).
- Guidance issued by the Department of Health required the removal of non-collapsible curtain rails on in-patient wards by 1 April 2002 (7). There have been no reports of suicide resulting from the use of bed curtain rails on wards since 2003.

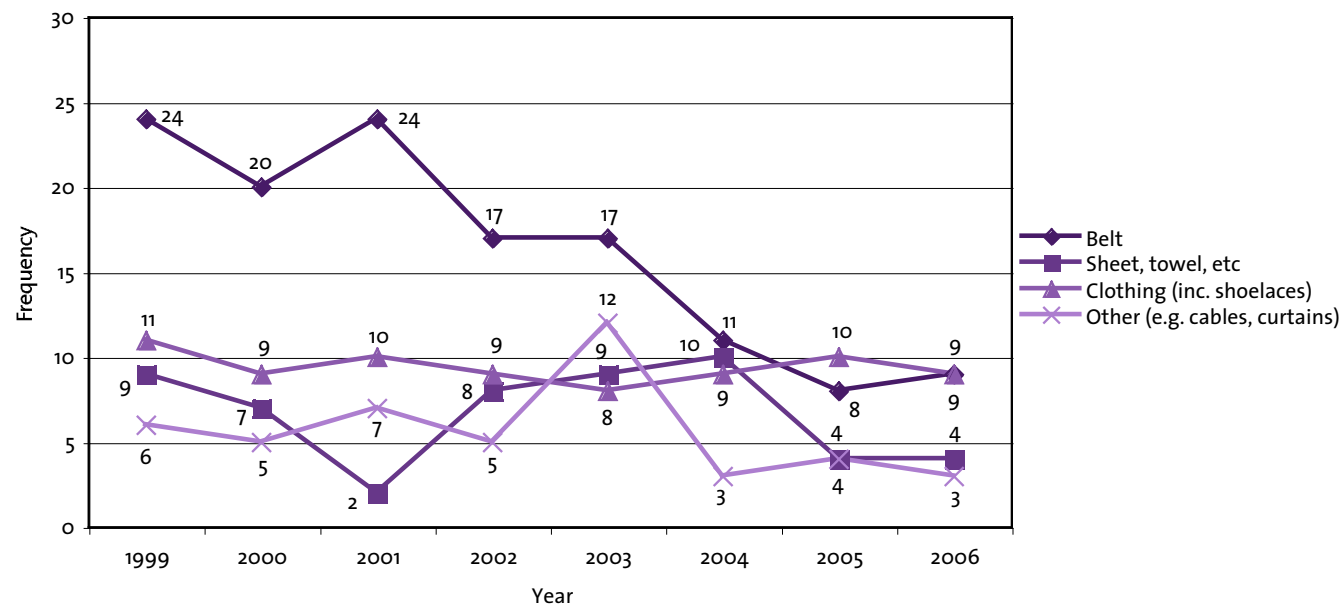
Conclusion

Changing patterns of ligatures and ligature points continue to be found and ward staff need to be aware of these.

TABLE 1 : In-patient suicides: ligature points used in hanging/strangulations on the ward (data available from 1999)

Ligature point	1999	2000	2001	2002	2003	2004	2005	2006	Total
Hook or door/window handle	13	10	9	15	8	2	3	0	60
Door	6	6	5	5	15	10	12	11	70
Window	5	6	4	4	6	9	4	8	46
Bed head	3	4	8	1	4	2	1	2	25
Bed curtain rail	5	3	1	2	0	0	0	0	11
Other rails (e.g. shower, toilet or wardrobe rail)	6	6	4	3	1	3	1	0	24
Pipes	4	1	4	3	1	1	1	2	17
Other fixtures (e.g. shower fixtures, taps, light fixtures, radiators)	5	4	9	6	10	6	3	4	47

FIGURE 2 : Ligatures used in hanging/strangulations on the ward (data available from 1999)



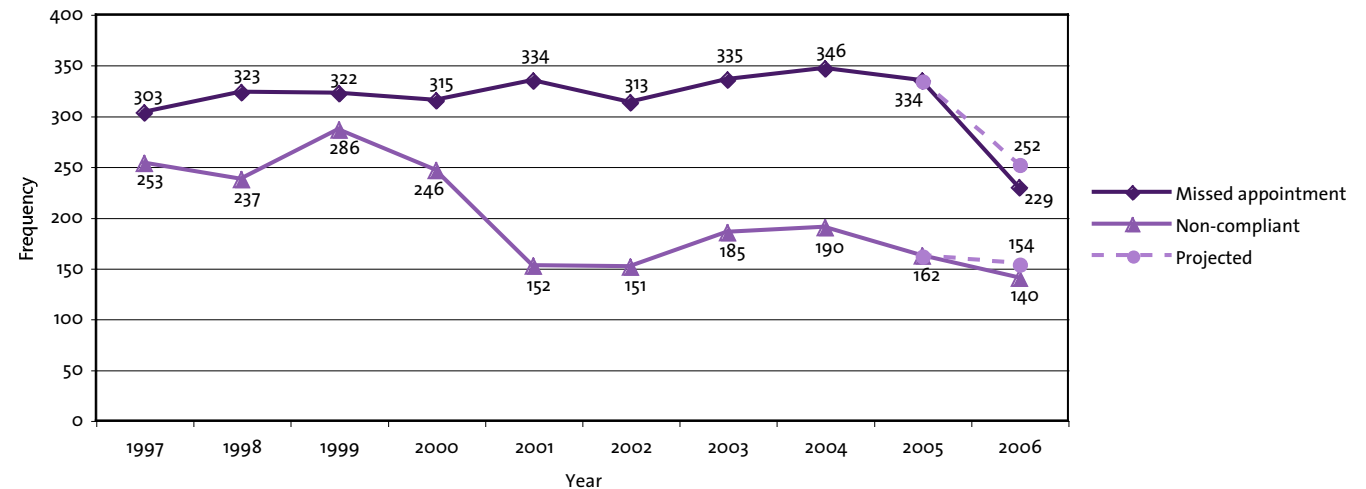
1.3 Suicide and homicide following disengagement from services and non-compliance with medication

Modern community services are intended to maintain contact with patients and ensure that treatment is received.

Suicide

- Of 13,066 suicides in 1997-2006, 3,154 (29%) patients missed their final service contact, an average of 315 per year.
- There has been no overall decrease in patients who have missed their final service contact although there was a marked decrease in 2006 (Figure 3).
- In 1,146 cases (62% of the 1,859 in which the information was obtained), assertive action was taken by services to re-engage the patient, such as a telephone call, a home visit, or contact with the patient's family.
- Those who had been detained under the Mental Health Act at the last admission were more likely to have been encouraged to re-engage compared to other patients.
- Seventeen percent (2,002 cases) were non-compliant with treatment in the month before suicide, an average of 200 per year.

FIGURE 3: Frequency of suicide cases who had missed their final service contact, and those non-compliant with treatment



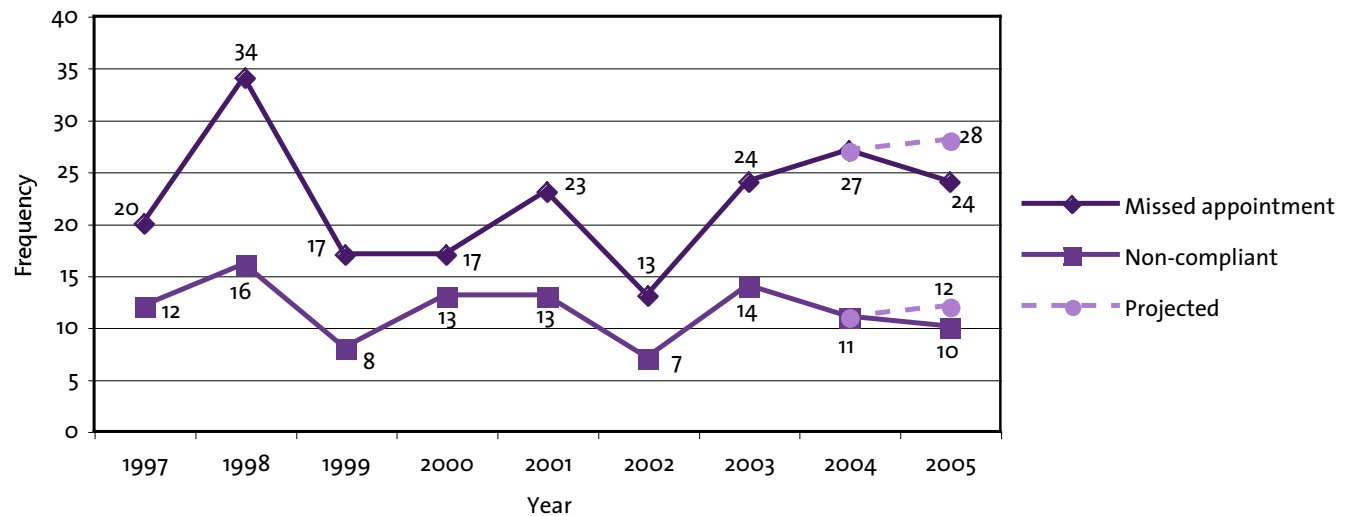
- The number non-compliant has significantly decreased over the report period (Figure 3).
- Face-to-face attempts to encourage medication compliance were made in 640 cases (74% of 868 respondents). There was no change in the percentage of attempts to re-engage patients over the report period.



Homicide

- Of 510 patient homicides in 1997-2005, 199 (42%) patients missed their final service contact, an average of 22 per year.
- In 66 cases (74% of the 89 in which the information was available), assertive action was taken by services to re-engage the patient, such as a telephone call, a home visit, contact with another professional or statutory agency, individuals at risk informed, or contact with the patient's family.
- A fifth (38, 20%) of disengaged patients had previously been detained under the Mental Health Act.
- In the 23 cases where no follow up action was taken, 21 (95%) were not subject to the Care Programme Approach (CPA). The most common diagnoses were personality disorder (6 cases), substance dependence (6 cases), adjustment disorder (4 cases), and alcohol dependence (3 cases). 12 had convictions for violence, 3 were previously detained under the Mental Health Act and 2 had previously been admitted to a psychiatric intensive care unit.
- 104 patients were non-compliant with treatment in the month before the homicide, an average of 12 per year. 55 (53%) were diagnosed with schizophrenia, 20 (19%) affective disorder, 14 (13%) personality disorder,

FIGURE 4: Frequency of homicide cases who had missed their final service contact, and those non-compliant with treatment



8 (8%) drug dependence, and 2 (2%) alcohol dependence.

- There were no significant trends in patients missing their last appointment with services or with patients who were non-compliant over the report period (Figure 4)
- Where the information has been provided by respondents, attempts to encourage medication compliance were made face-to-face in 20 (40% of available responses) cases, and with the patients' families in 19 (37% of available responses) cases.

Conclusion

Suicides preceded by non-compliance with treatment have become less common. A similar fall in loss of contact with services has also been found in the most recent figures. There has been no equivalent fall in homicide cases.

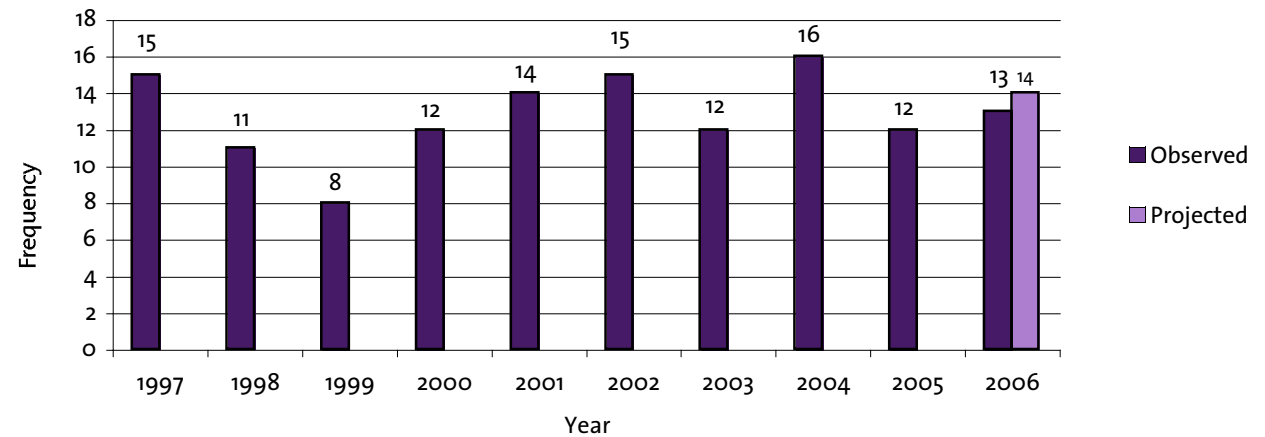


1.4 Suicide by patients with eating disorders

Research evidence suggests a high risk of suicide in people with an eating disorder.

- During 1997-2006, there were 128 suicides by patients with a primary (n=41), secondary (n=48) or tertiary (n=39) diagnosis of an eating disorder. This represents 1% of all patient suicides.
- On average there have been 13 deaths per year, with no evidence of a recent increase or decrease (Figure 5).
- 114 (89%) were female; the median age was 34.
- There was a high rate of previous self-harm (108, 86%).
- 89 (70%) had been ill for longer than 5 years.
- 36 (28%) had more than 5 previous admissions, while 30 (24%) had never been admitted.
- 64 (50%) were receiving care under the Care Programme Approach.
- Clinicians more often viewed cases with an eating disorder as at high long-term suicide risk, 56% (50 cases) v. 41% (3,984 cases) without an eating disorder.

FIGURE 5: Suicides by patients with eating disorders



- Of the 41 cases with a primary diagnosis of an eating disorder, 31 (76%) had a co-morbid psychiatric condition, most often depressive illness (19 cases, 61%) and personality disorder (8 cases, 26%).

Conclusion

On average there are 13 deaths per year among patients with an eating disorder. More than half (59%) had a diagnosis of depression (either primary, secondary, or tertiary diagnosis).



2. SUICIDE

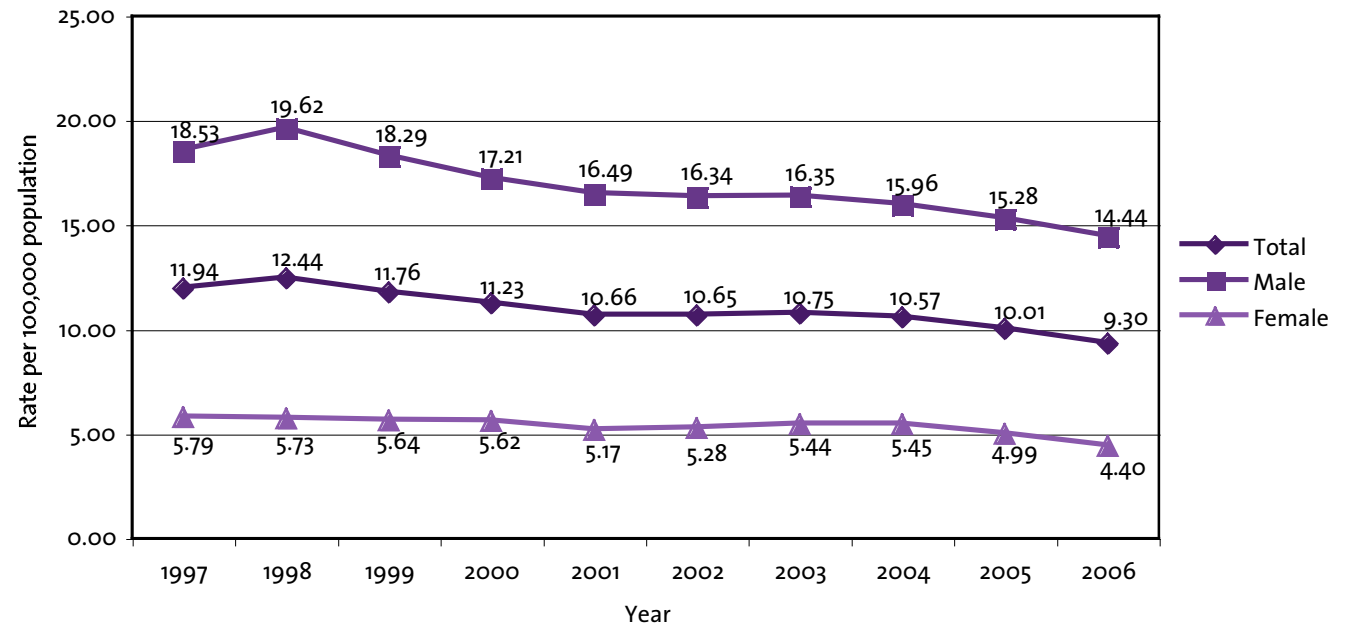
2.1 Suicide in the general population

- There has been a fall in the number and rate of suicides and this fall is seen in both males and females (Table 2, Figure 6).
- Numbers and rates have fallen in all age-groups, particularly in those aged under 25 and 25-44 (Table 3, Figure 7).
- The proportion of suicides who are aged 45-64 has therefore increased (Table 3).

TABLE 2: Number of suicides in the general population by year and sex

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Male	4017	4275	4013	3803	3677	3674	3702	3640	3517	3350
Female	1341	1333	1320	1322	1224	1256	1300	1310	1207	1071
Total	5358	5608	5333	5125	4901	4930	5002	4950	4724	4421

FIGURE 6: Rates of general population suicide by year and sex



Statistical note: Trend tests were carried out to determine if a statistically significant time trend existed. This resulted in a significantly improved model ($p < 0.001$) for general population suicides indicating a significant downward trend.



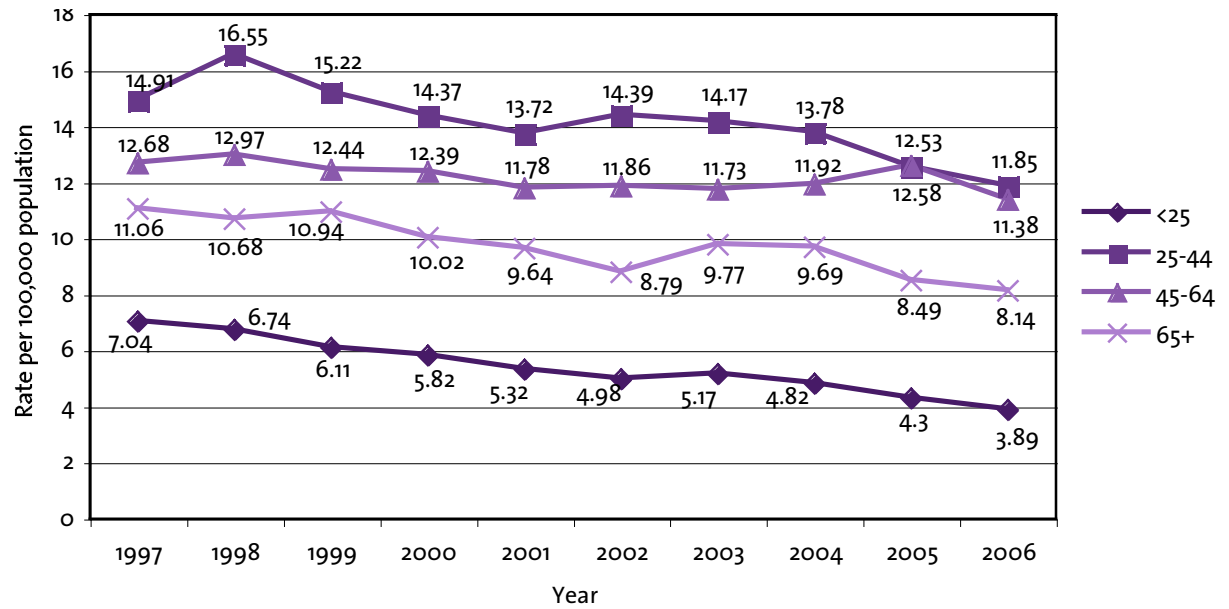
TABLE 3: Number (percentage) of suicides in the general population by year and age-group

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Under 25	669 (12)	642 (11)	586 (11)	563 (11)	523 (11)	497 (10)	523 (10)	494 (10)	445 (9)	405 (9)
25-44	2264 (42)	2520 (45)	2325 (44)	2205 (43)	2107 (43)	2203 (45)	2161 (43)	2097(42)	1913 (40)	1808 (41)
45-64	1512 (28)	1564 (28)	1518 (28)	1527 (30)	1466 (30)	1492 (30)	1491 (30)	1533 (31)	1638 (35)	1507 (34)
65+	911 (17)	882 (16)	904 (17)	830 (16)	804 (16)	738 (15)	827 (17)	826 (17)	728 (15)	701 (16)
Total	5356*	5608	5333	5125	4900*	4930	5002	4950	4724	4421

Statistical notes: Figures do not tally with Table 2 due to 3 cases with unknown age (indicated by *)
 Some percentages do not total 100% due to rounding



FIGURE 7: Rates of general population suicide by year and age-group



Statistical note: Trend tests were carried out to determine if a statistically significant time trend existed. This resulted in a significantly improved model ($p < 0.001$) for general population suicides indicating a significant downward trend for all age-groups.



2.1.1 Variation in suicide by Strategic Health Authority (SHA)

- In the most recent 3 year period (2004-2006), the highest rate of suicide was in the North West, at 11.3 per 100,000 population, and the lowest in South Central, at 9.2 per 100,000 population (Figure 8).
- Generally, the rate of suicide within each SHA has decreased over the report period.
- The greatest falls in the rate of suicide are seen in Yorkshire and the Humber, the North West, and London (Figure 9). East Midlands, the South West, South East Coast and East of England showed the smallest falls.

FIGURE 8: Rate of suicide by Strategic Health Authority (average rate 2004-2006)

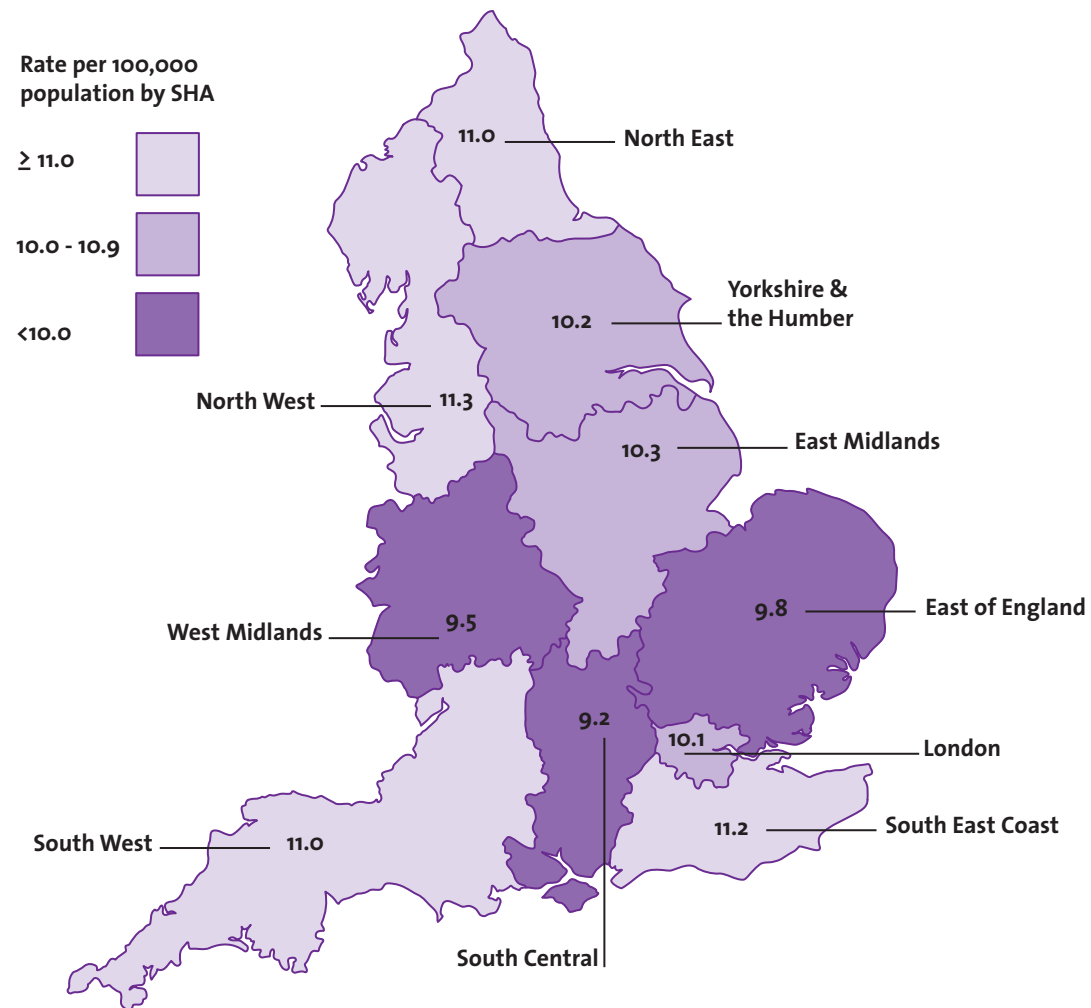
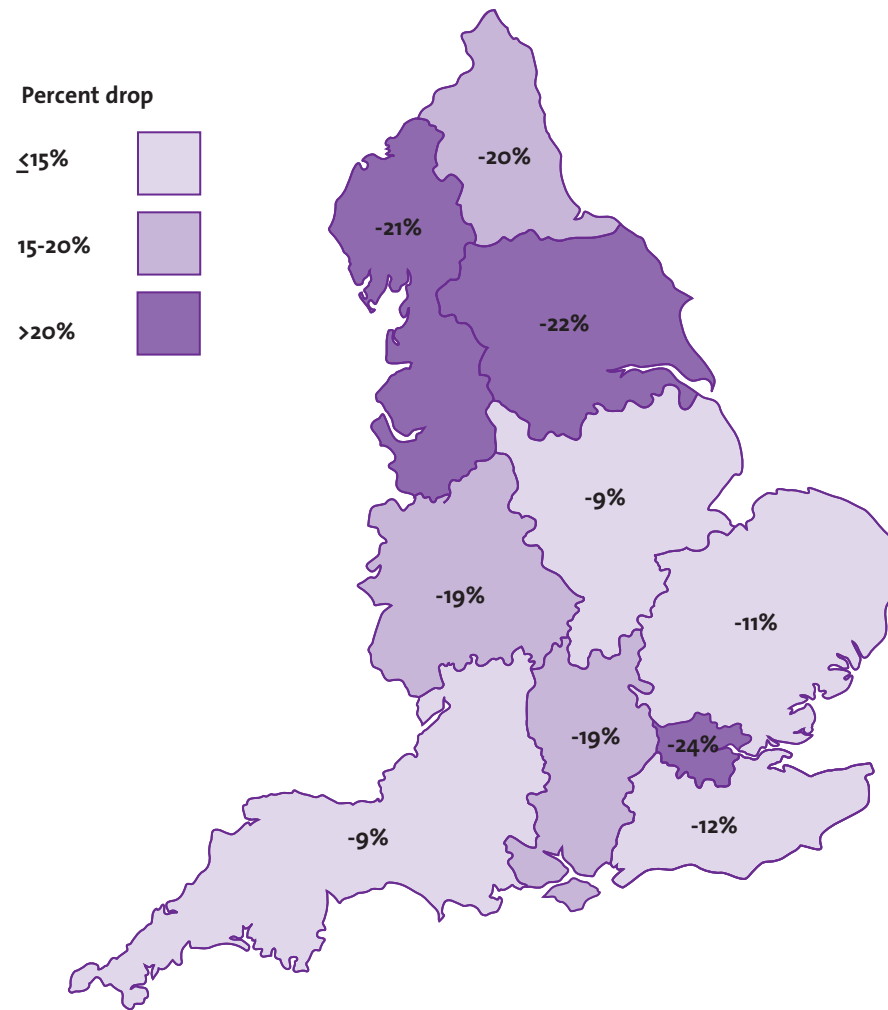


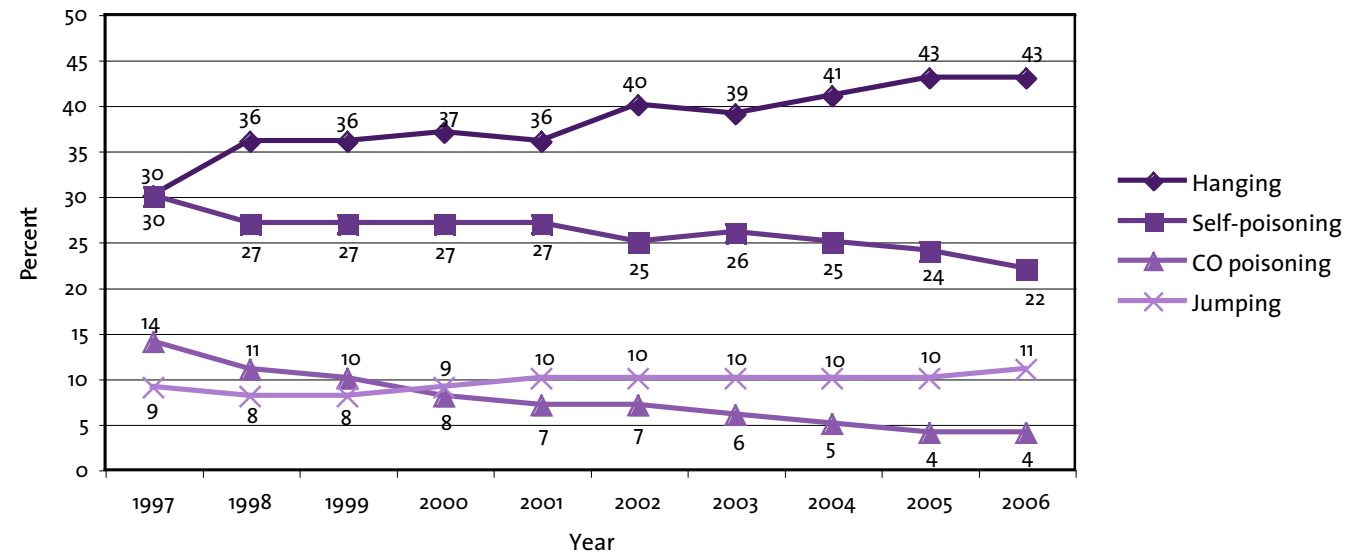
FIGURE 9: Percent change in the rate of suicide from 1997-1999 to 2004-2006 by Strategic Health Authority



2.1.2 Method of suicide

- The most common methods of suicide were hanging/strangulation, self-poisoning (overdose) and jumping/multiple injuries.
- The frequency of methods differed between the sexes: in males the commonest methods were hanging/strangulation, self-poisoning and jumping/multiple injuries; in females, overdose was by far the commonest method, followed by hanging/strangulation.
- Over the report period, there have been changes in method of suicide (Figure 10). Hanging and jumping have increased, whilst self-poisoning and carbon monoxide poisoning have decreased. Figures for drowning, firearms and burning have remained stable. These changes in method of suicide have been found in both males and females. However, in males there has also been a significant increase in suicide by cutting/stabbing, which in 2006 accounted for 28 deaths.

FIGURE 10: General population suicides: cause of death by year



2.2 Patient suicide

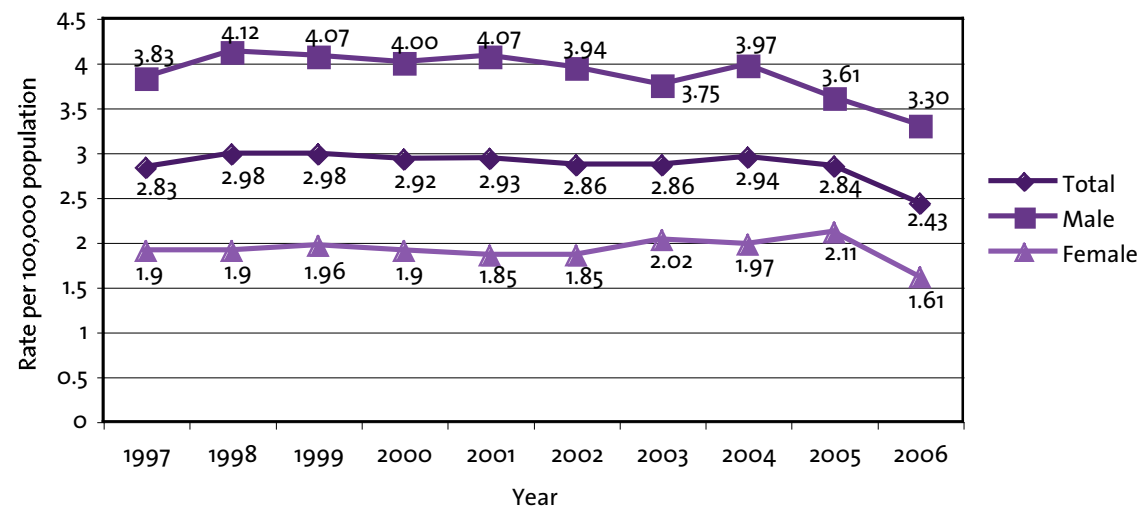
2.2.1 Numbers and rates

- During 1997-2006, 13,066 suicides (26% 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.
- There has been a significant decrease in the rate of suicide across the time period of the study overall and for males (Table 4, Figure 11).
- There has been a significant decrease in the rate of suicide between 2004-2006 when patient numbers rather than general population figures are used as the denominator (Figure 12).
- The proportion of patient suicides in the younger age-groups (under 25, 25-44 years) has decreased while figures for older patients have increased (Table 5).

TABLE 4: Number of patient suicides by year and sex

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Male	830	899	892	884	908	885	850	905	832	766
Female	441	442	458	447	437	439	483	473	510	391
Total	1271	1341	1350	1331	1345	1324	1333	1378	1342	1157

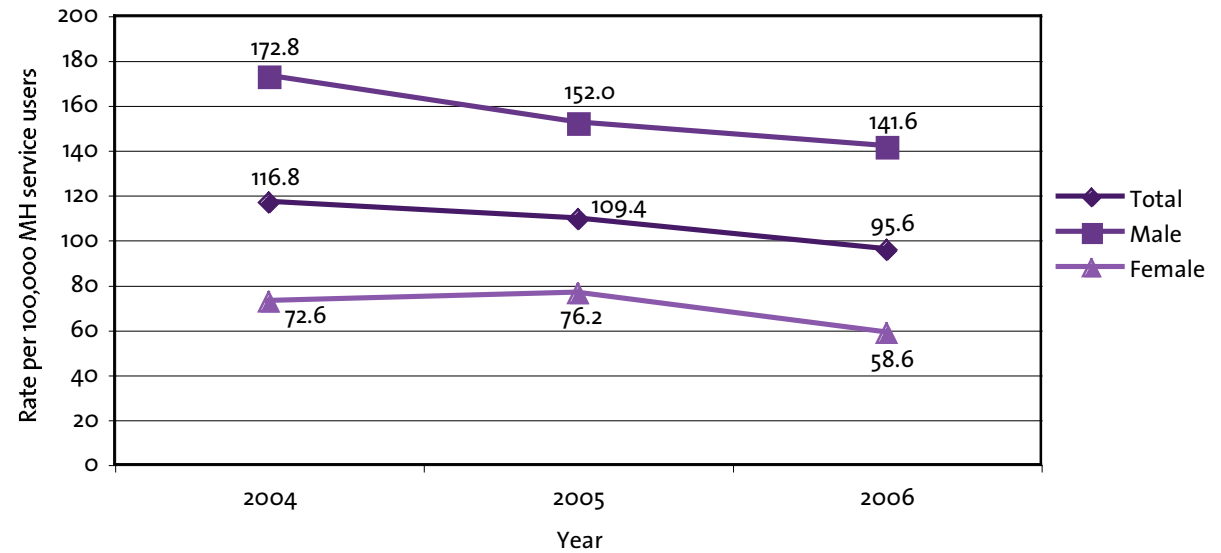
FIGURE 11: Rates of patient suicide by year and sex



Statistical note: Trend tests were carried out to determine if a statistically significant time trend existed. This resulted in a significantly improved model ($p < 0.001$) indicating a significant downward trend overall and for males.



FIGURE 12: Rate of suicide per 100,000 mental health service users (England only, 2004-2006)



Statistical notes: The Minimum Mental Health dataset was used to calculate rates for the available years (2004-2006).

Trend tests were carried out to determine if a statistically significant time trend existed. This resulted in a significantly improved model ($p < 0.001$) indicating a significant downward trend overall and for males and females.



TABLE 5: Number (percentage) of patient suicides by year and age-group

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Under 25	135 (11)	127 (9)	121 (9)	105 (8)	111 (8)	92 (7)	105 (8)	99 (7)	94 (7)	80 (7)
25-44	608 (48)	652 (49)	626 (46)	633 (48)	596 (44)	632 (48)	601 (45)	613 (44)	548 (41)	479 (41)
45-64	374 (29)	425 (32)	423 (31)	440 (33)	462 (34)	440 (33)	442 (33)	490 (36)	537 (40)	428 (37)
65+	154 (12)	137 (10)	180 (13)	153 (11)	176 (13)	160 (12)	185 (14)	176 (13)	163 (12)	170 (15)
Total	1271	1341	1350	1331	1345	1324	1333	1378	1342	1157

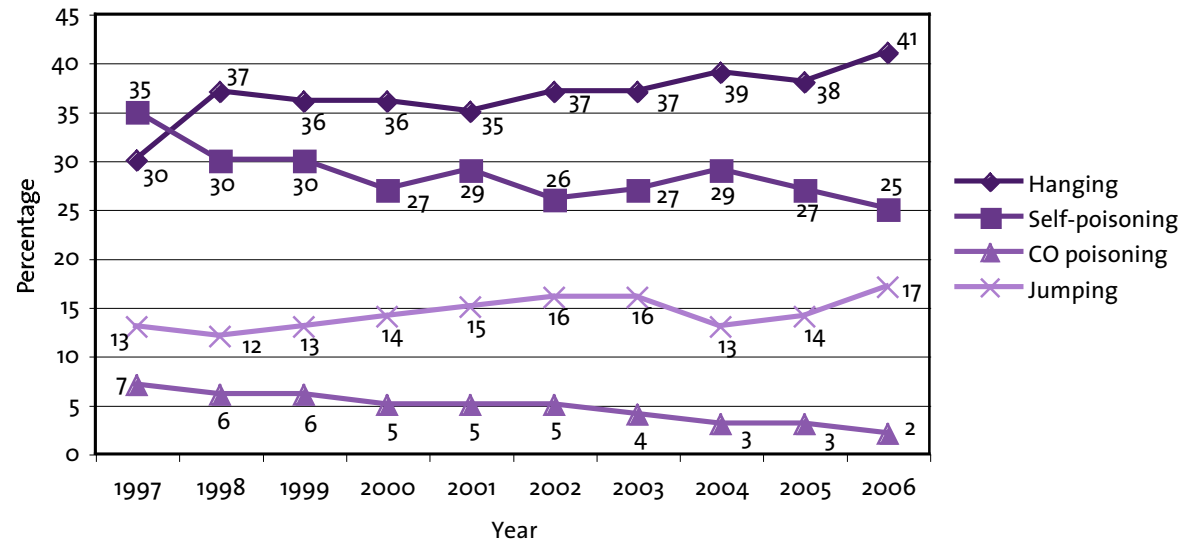
Statistical note: Some percentages do not total 100% due to rounding



2.2.2 Method of suicide

- The most common methods of suicide by patients were hanging/self-strangulation, self-poisoning and jumping/multiple injuries.
- There has been a downward trend in self-poisoning and carbon monoxide poisoning (Figure 13). An upward trend has occurred in hanging (369 cases, 30% in 1997 and 476 cases, 41% in 2006) and, in males only, jumping (105 cases, 13% in 1997 and 129 cases, 17% in 2006). Figures for drowning, firearms and burning have remained stable.

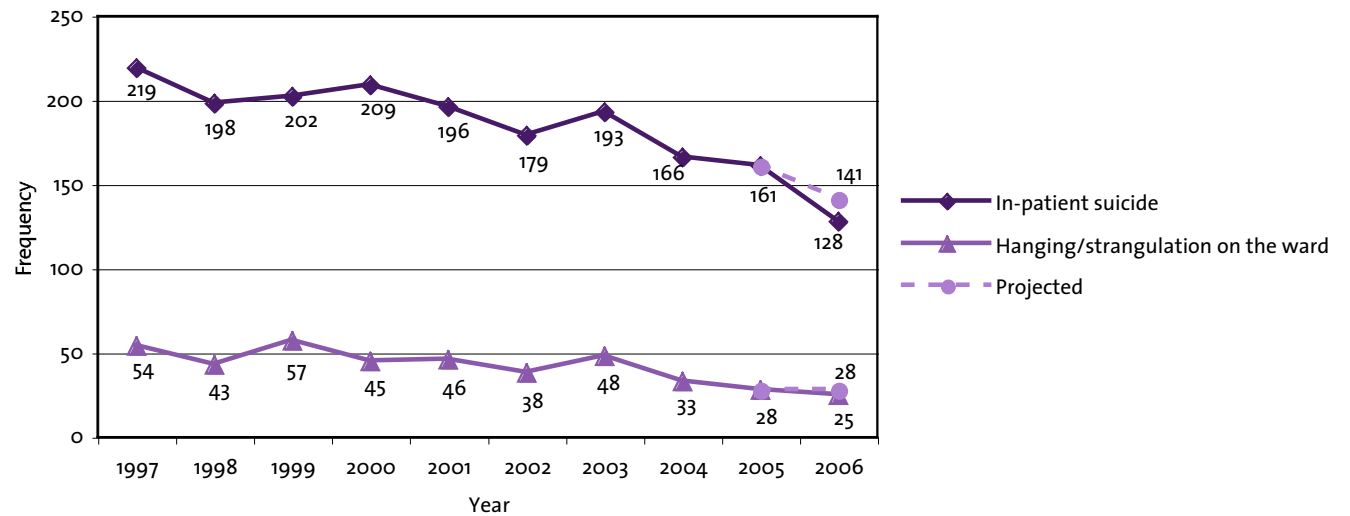
FIGURE 13: Method of suicide



2.3 In-patient suicide

- There has been a 36% fall in the number of in-patients dying by suicide.² A reduction in the rate of in-patient suicide has previously been found (Kapur et al, 2006) (8) (i.e. taking into account admission figures).
- The number of patients who died on the ward by hanging/strangulation has fallen by 48% (Figure 14).²
- Further details of changes in ligatures and ligature points are presented in the Current Issues section.

FIGURE 14 : Number of psychiatric in-patients who died by suicide; number of in-patients who died by hanging/strangulation on the ward



²Based on projected figures.



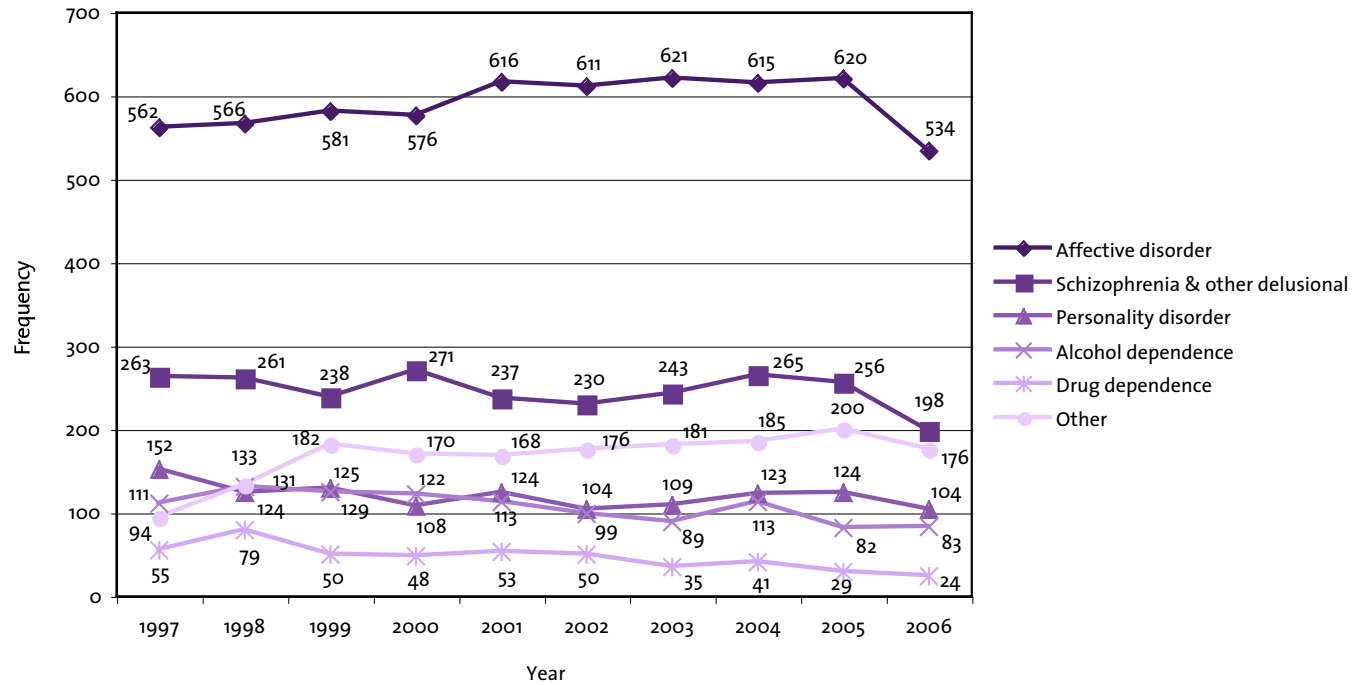
2.4 Diagnosis

- Primary psychiatric diagnoses are shown in Figure 15.
- The number of patients with schizophrenia has remained stable over the study period.
- The number of patients with alcohol dependence or drug dependence has fallen.
- There has been a fall in the number of patients with personality disorder.
- The number of patients with other diagnoses, particularly adjustment disorder, has increased.

Conclusion

Suicides by in-patients continue to fall. Suicides by patients in general appear to be falling.

FIGURE 15: Primary psychiatric diagnoses of patient suicides cases by year



3. HOMICIDE

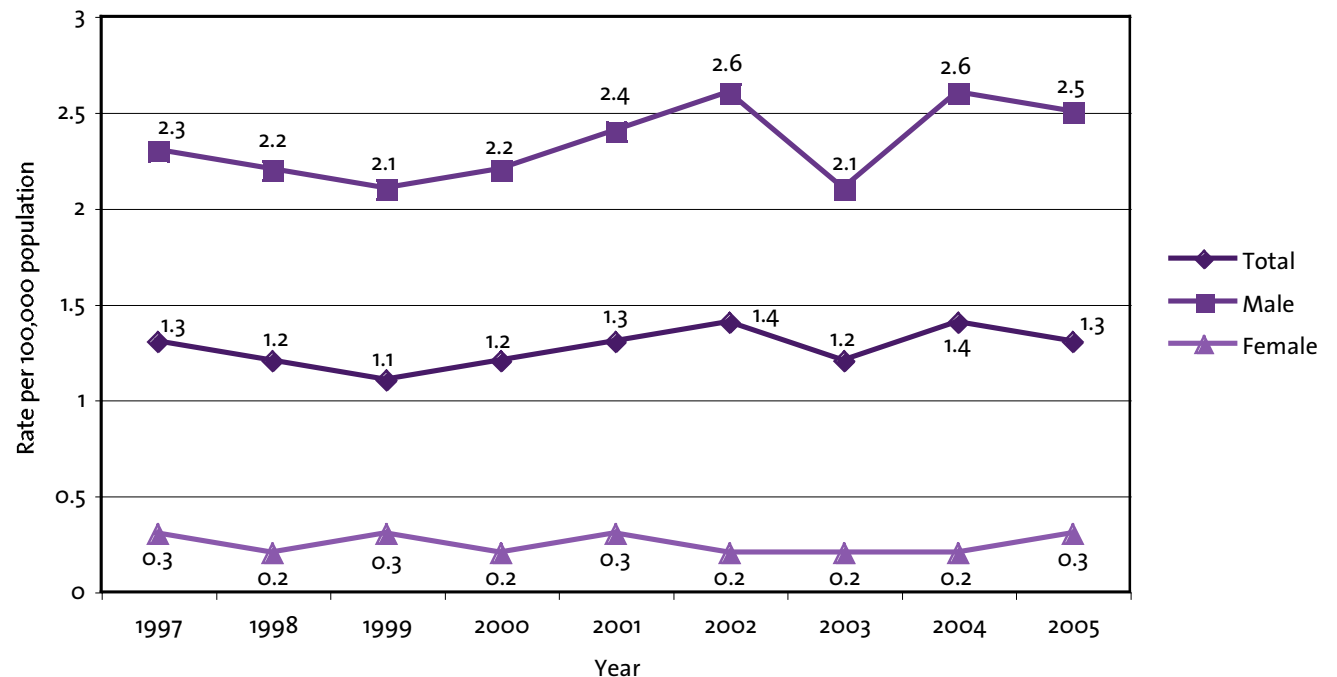
3.1 Homicide in the general population³

- The number and rate of general population homicides have increased. However, these increases are found only for males (Table 6, Figure 16).
- There has been no trend in homicides by people aged under 25. However, there has been a rise in homicides committed by those aged 25-44 and over 45 (Table 7, Figure 17) though the figures in the over 45 group remain comparatively low.

TABLE 6: Number of homicides in the general population by year and sex

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Male	505	480	461	480	535	583	485	596	568
Female	58	49	60	46	60	51	55	53	64
Total	563	529	521	526	595	634	540	649	632

FIGURE 16: Rates of general population homicide by year and sex



Statistical note: Trend tests were carried out to determine if a statistically significant time trend existed. This resulted in a significantly improved model ($p < 0.01$) for general population homicides indicating a significant upward trend.

³Inquiry general population homicide figures are not comparable to those published by Home Office Statistics (see Presentation of Findings for explanation)

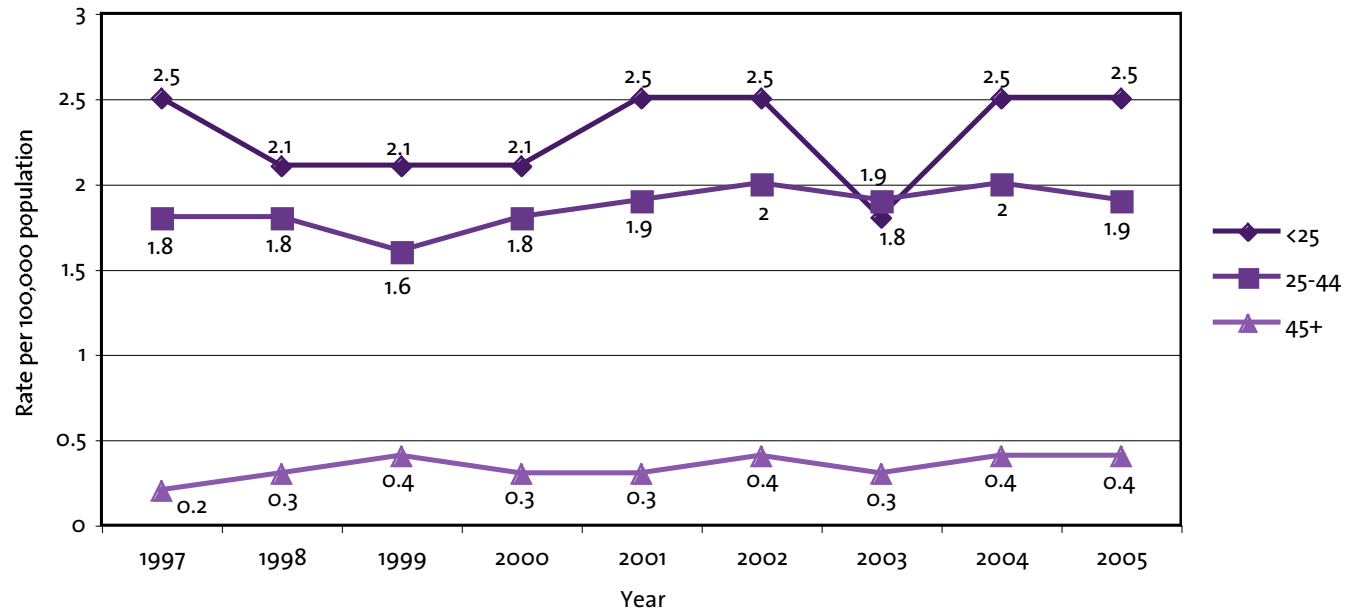


TABLE 7: Number (percentage) of homicides in the general population by year and age-group

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005
Under 25	237 (42)	200 (38)	198 (38)	200 (38)	242 (41)	245 (39)	181 (34)	253 (39)	260 (41)
25-44	277 (49)	272 (51)	247 (47)	272 (52)	294 (49)	313 (49)	285 (53)	309 (48)	291 (46)
45+	49 (9)	57 (11)	76 (15)	54 (10)	59 (10)	76 (12)	74 (14)	87 (13)	81 (13)
Total	563	529	521	526	595	634	540	649	632

Statistical note: Some percentages do not total 100% due to rounding

FIGURE 17: Rates of general population homicide by year and age-group



3.1.1 Variation in homicide by Strategic Health Authority (SHA)

- In the most recent 3 year period (2003-2005), the highest rates of homicide were in London (1.90 per 100,000 population) and the North West (1.53 per 100,000 population) (Figure 18).
- There has been a decrease in the rate of homicide in the North East and North West from 1997-1999 to 2003-2005 (Figure 19).
- All other SHA areas have seen a rise in the rate of homicide. The highest rate increases have been in the East Midlands and London (Figure 19).

FIGURE 18: Rate of homicide by Strategic Health Authority (average rate 2003-2005)

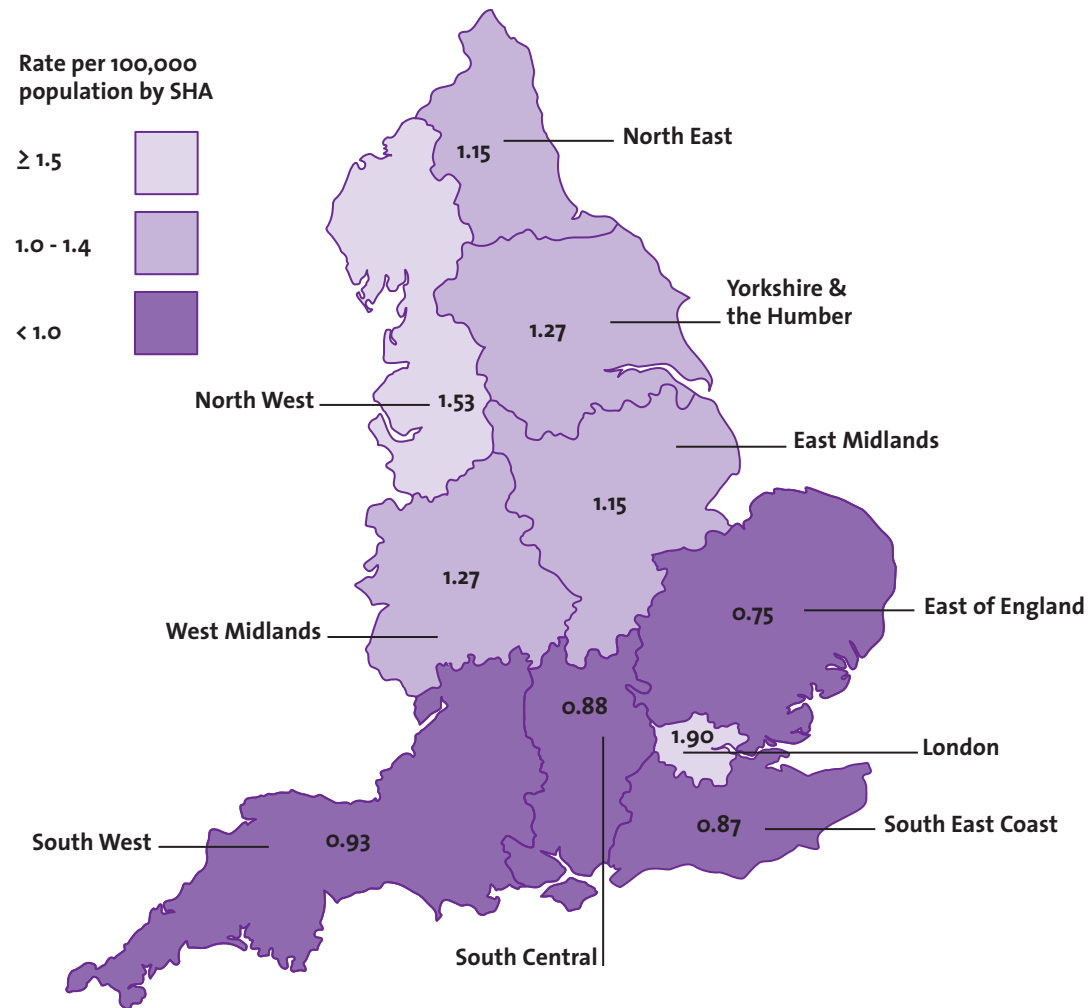
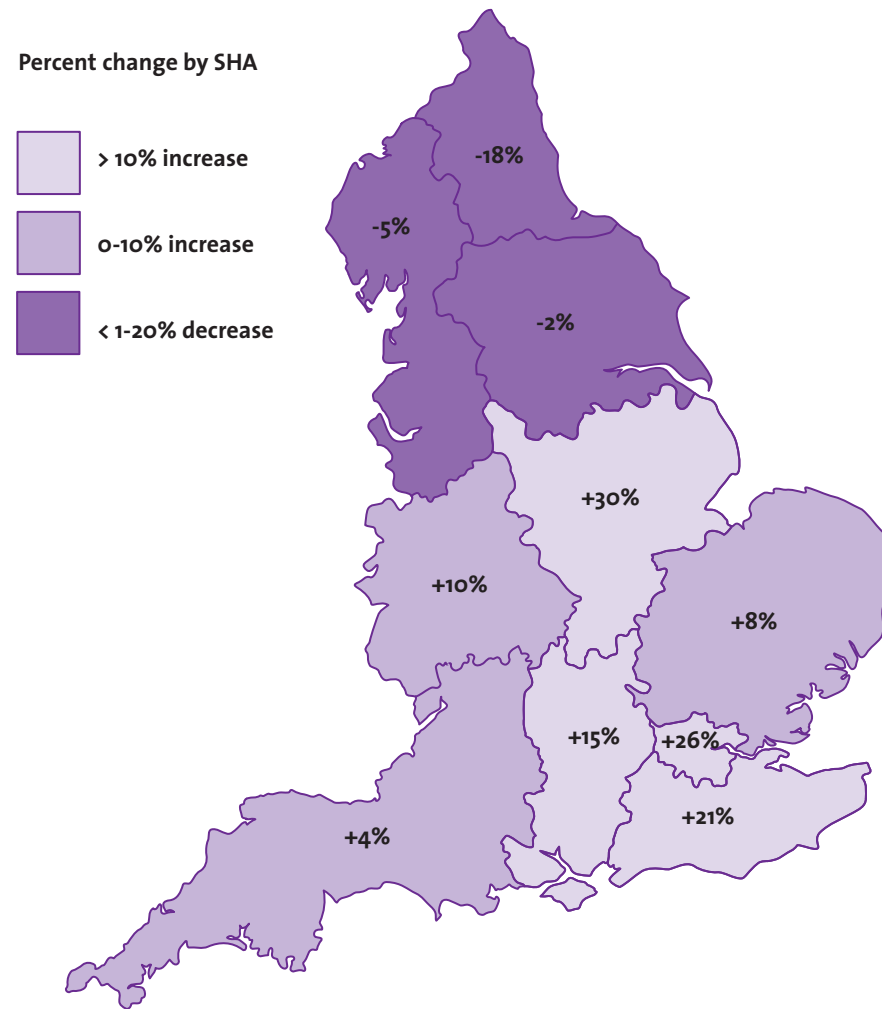


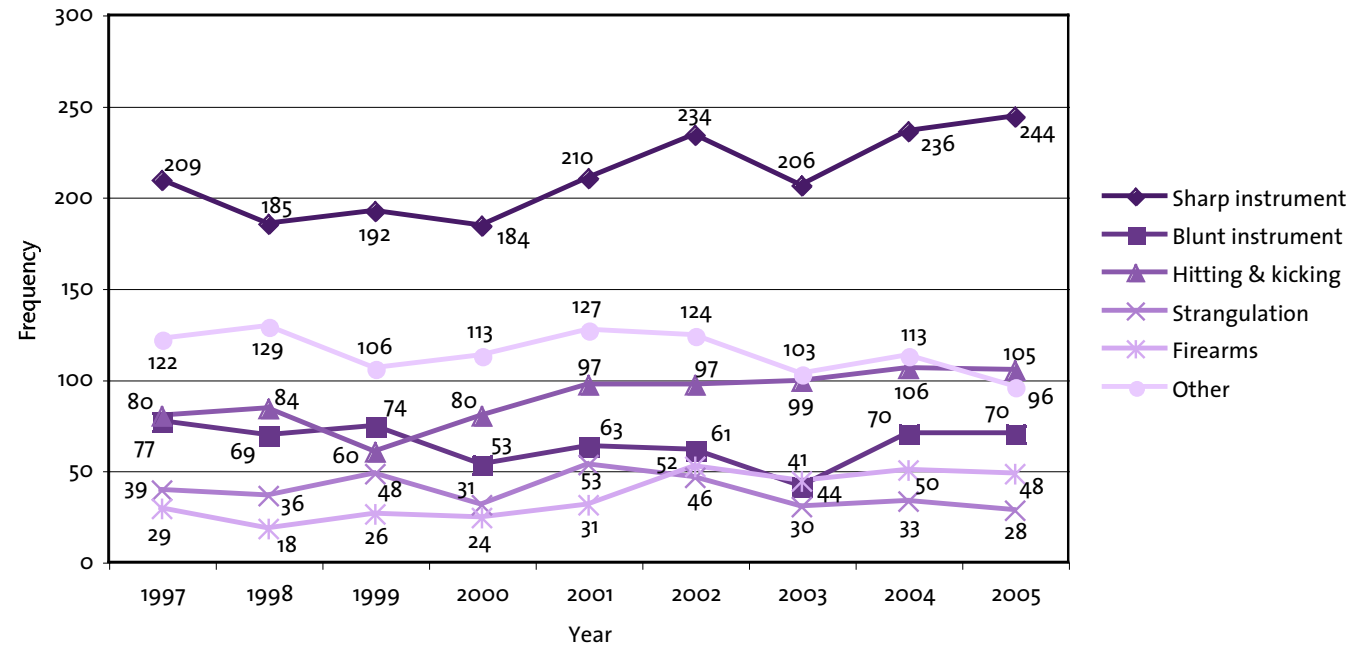
FIGURE 19: Change in the rate of homicides from 1997-1999 to 2003-2005, by Strategic Health Authority



3.1.2 Method of homicide

- The most common method of homicide is the use of a sharp instrument (Figure 20). The rise in the use of sharp instruments is not significant.
- Firearm use, and hitting and kicking have increased.
- There has been a decrease in the use of blunt instruments and strangulation.

FIGURE 20 : General population: method of homicide by year

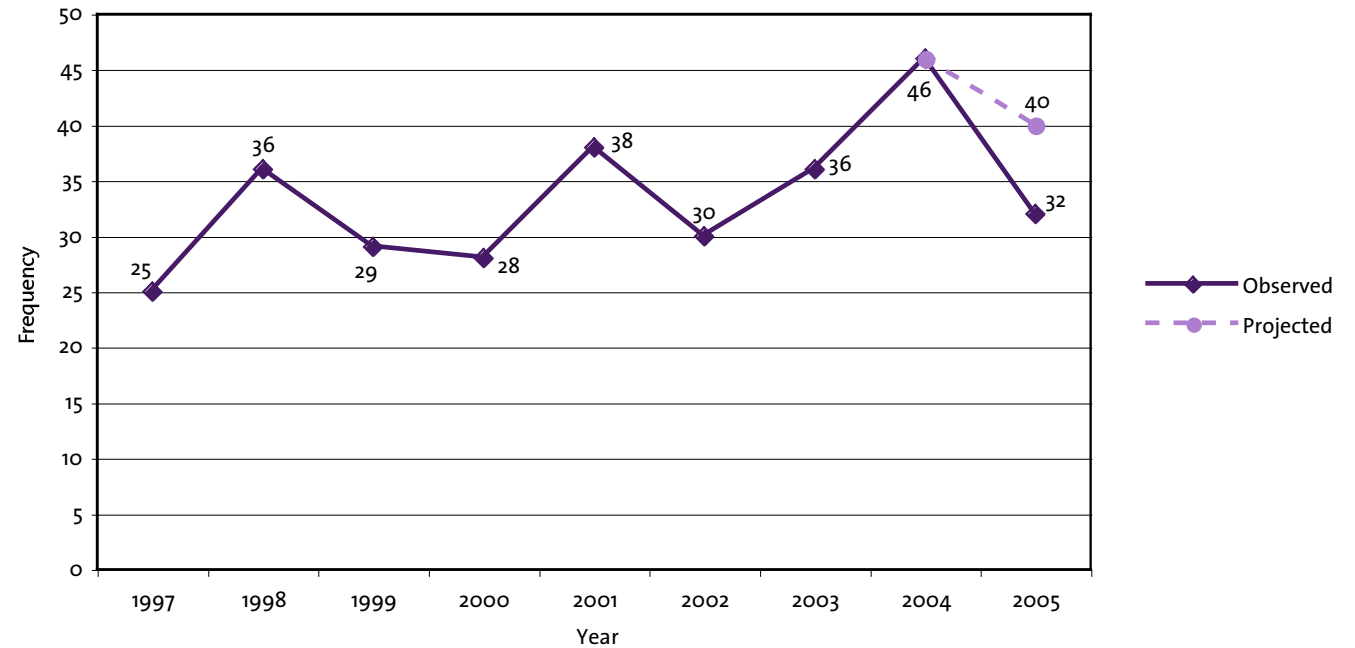


3.2 Mental illness and homicide in the general population

3.2.1 Homicide by people with schizophrenia

- There has been a significant increase in the number of homicides by people with schizophrenia (Figure 21).
- Figure 21 includes current patients, past patients and people who have never been patients. Homicides by patients only are presented in Figure 22.

FIGURE 21 : Primary diagnosis of schizophrenia (lifetime history)



3.2.2 Mental illness at the time of homicide

- There has been an increase in the number of perpetrators with symptoms of mental illness at the time of the offence. Symptoms included hypo(mania), depression, delusions, hallucinations and other psychotic symptoms (e.g. passivity, thought insertion) (Table 8).
- Within this group, there has also been an upward trend in people with symptoms of psychosis at the time of the offence.
- Of the 289 people who were psychotic, 226 cases (78%) had a diagnosis of schizophrenia.
- 178 (63%) psychotic people used a sharp instrument in the homicide.
- Of those considered to be psychotic at the time of the offence, 59 (20%) were convicted of murder, 103 (36%) of manslaughter on the grounds of diminished responsibility, 109 (38%) of other manslaughter, 9 (3%) were unfit to plead, and 9 (3%) were not guilty by reason of insanity.
- 205 (71%) received a hospital disposal, 79 (27%) were sent to prison, and 20 (7%) were given a non custodial sentence.

TABLE 8 : Number of people with mental illness at the time of the offence by year (based upon all cases of homicide with a psychiatric report available)

	1997 N	1998 N	1999 N	2000 N	2001 N	2002 N	2003 N	2004 N	Projected 2005 N
Abnormal mental state	54	56	55	46	58	61	69	74	77
Psychotic at time of offence	22	34	24	23	31	30	43	51	48



3.3 Patient homicide

- During 1997-2005, 510 people convicted of homicides (10% of all those convicted) were identified as patient homicides, i.e. the person had been in contact with mental health services in the 12 months prior to the offence.
- Although numbers have risen in recent years (2003-2005) there has not been a significant rise over the time period of the study (Figure 22).
- The number of cases in each age group has fluctuated but shows no consistent trend (Table 9).

FIGURE 22 : Patient homicides: frequency of homicide by year and sex

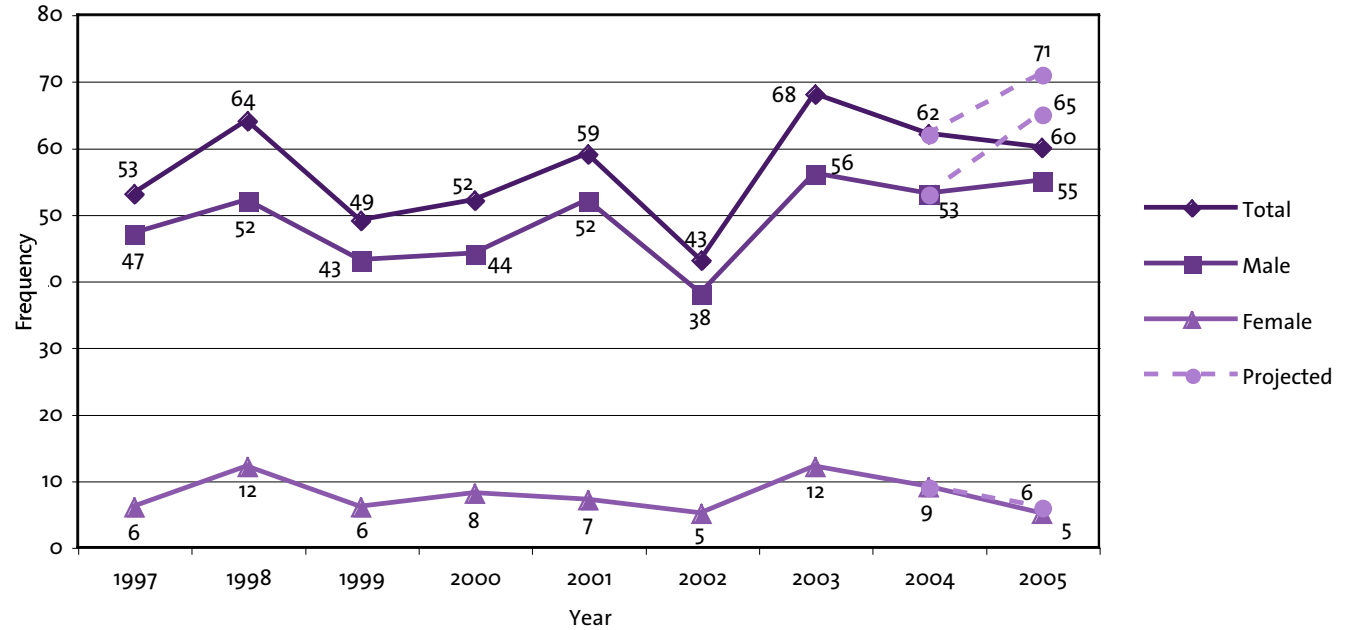


TABLE 9 : Number (percentage)² of patient homicides by year and age-group

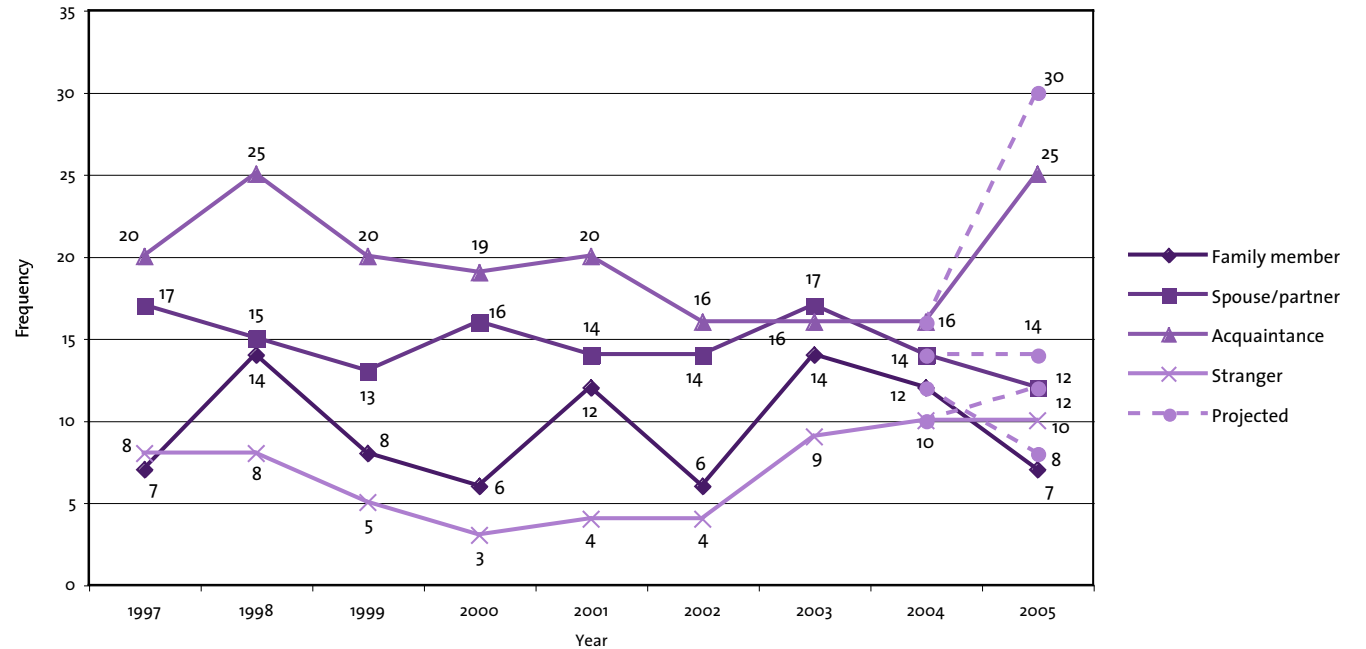
Age	1997	1998	1999	2000	2001	2002	2003	2004	2005
Under 25	11 (21)	17 (27)	13 (27)	15 (29)	17 (29)	7 (16)	18 (26)	15 (24)	24 (34)
25-44	31 (58)	38 (59)	27 (55)	28 (54)	33 (56)	29 (67)	37 (54)	38 (61)	38 (54)
45+	11 (21)	9 (14)	9 (18)	9 (17)	9 (15)	7 (16)	13 (19)	9 (15)	9 (13)
Total	53	64	49	52	59	43	68	62	71



3.3.1 Relationship of victim to perpetrator

- The relationship of victim to perpetrator is shown in Figure 23.
- Similar to general population homicides, male patients more often killed acquaintances whereas females commonly killed family members or spouse/partners.
- Although figures fluctuated over the time period of the study, no overall trends were identified.

FIGURE 23 : Patient homicides: relationship of victim to perpetrator by year



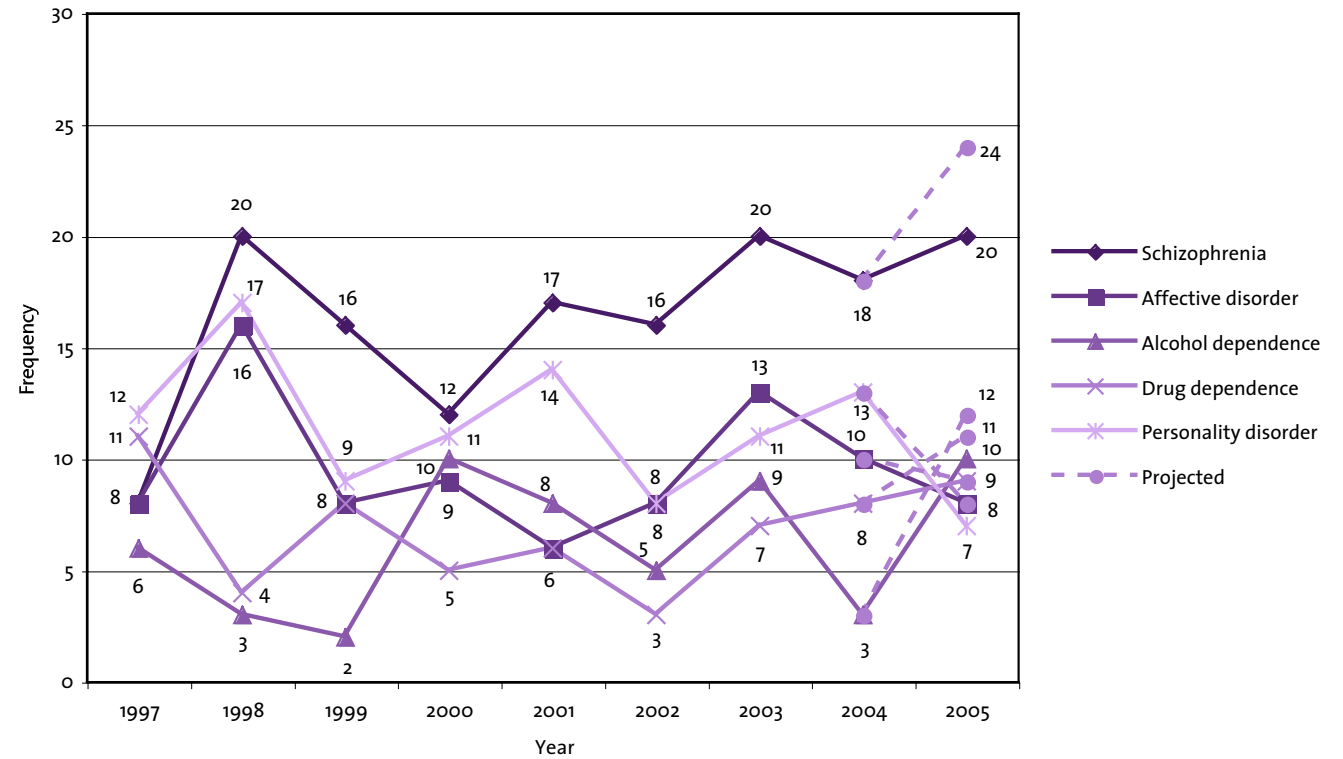
3.3.2 Diagnosis

- There were no trends in primary diagnosis (Figure 24).
- Schizophrenia remains the most common diagnosis.

Conclusion

Homicides by people with mental illness appear to have risen from 1997 to 2004/05. However this rise is not found in people under mental health care, suggesting that any increase has occurred in non-patients. We cannot say whether figures have risen or fallen since 2004/05.

FIGURE 24 : Primary psychiatric diagnoses of patients from questionnaires and psychiatric reports by year

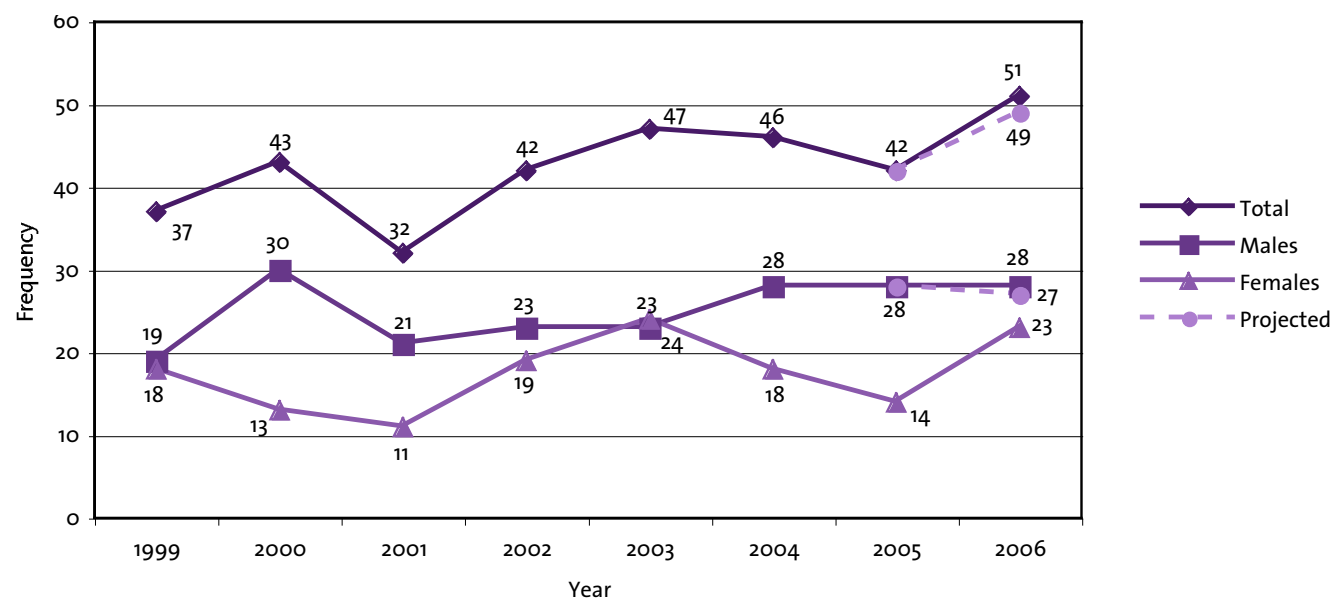


4. SUDDEN UNEXPLAINED DEATH IN PSYCHIATRIC IN-PATIENTS

4.1 Frequency of sudden unexplained death (England and Wales)

- There has been an increase in the frequency of sudden unexplained death (SUD) in mental health in-patients between 1999 and 2006 (Figure 25, Table 10).

FIGURE 25: Frequency of sudden unexplained deaths by year and sex



Statistical note: Data collection began on 1 March 1999



TABLE 10: Number (percentage) of sudden unexplained death by year and age-group

Age	1999	2000	2001	2002	2003	2004	2005	2006
Under 25	2 (5)	1 (2)	0	1 (2)	0	2 (4)	2 (5)	0
25-44	6 (16)	16 (37)	4 (13)	9 (21)	12 (26)	10 (22)	8 (19)	10 (20)
45-64	12 (32)	15 (35)	11 (35)	13 (31)	15 (32)	14 (30)	17 (41)	19 (39)
65+	17 (46)	11 (26)	17 (53)	19 (45)	20 (43)	20 (44)	15 (36)	20 (41)
Total	37	43	32	42	47	46	42	49

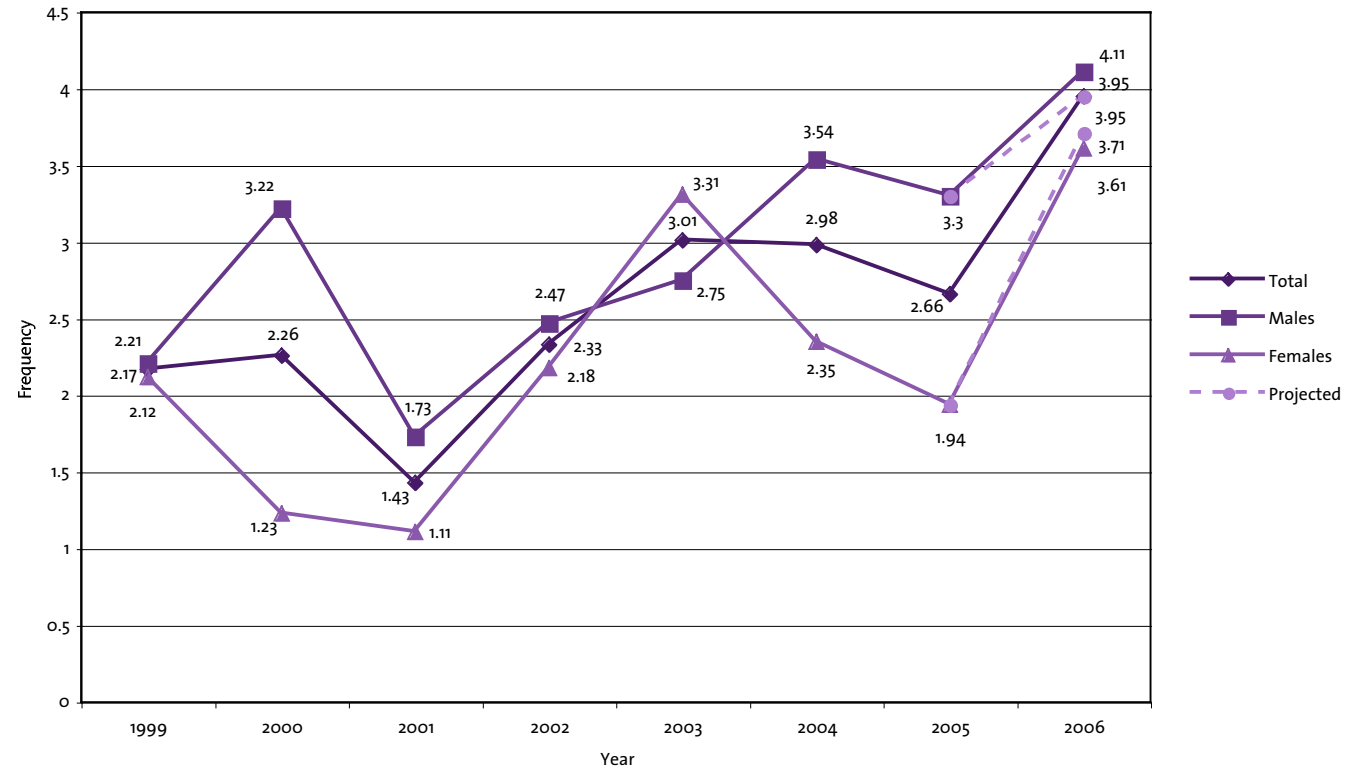
Statistical note: Data collection began on 1 March 1999



4.2 Rates of sudden unexplained death (England only)

- The rates of SUD in patients in England increased between 1999 and 2006 (Figure 26, Table 11). Trend tests indicate that this increase is significant (8.8% per year overall, 7.6% in men, 10.4% in women).
- SUD is more common in older people and in men, though the gender difference is mainly in the younger patients (Table 11).

FIGURE 26 : Rate of sudden unexplained death by year and sex, England only



Statistical note: Data collection began on 1 March 1999



4.3 Ethnicity

- SUD in patients from an ethnic minority shows no clear pattern over time (Table 12). There are 4-5 cases per year, around 10% of the total.
- There are 2 to 3 post-restraint deaths per year (Table 13). Of the total 13 post-restraint deaths, 2 were patients from an ethnic minority.
- We do not know whether restraint caused these deaths.

Conclusion

The reported number of sudden unexplained deaths on mental health wards has risen. Possible explanations include a true rise in sudden death, changes in the in-patient population and better reporting. There are 2 to 3 deaths per year occurring within 24 hours of restraint. These numbers are too small to demonstrate an association with ethnic group.

TABLE 11 : Rate of sudden unexplained death by age-group at admission, England only

	Males		Females		All	
	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)
15-44	60	1.41 (1.07-1.81)	21	0.62 (0.38-0.95)	81	1.06 (0.84-1.31)
45-64	64	4.48 (3.45-5.72)	42	2.72 (1.96-3.67)	106	3.56 (2.92-4.31)
65-74	55	9.85 (7.42-12.83)	60	8.03 (6.13-10.34)	115	8.81 (7.27-10.58)
TOTAL	179	2.86 (2.46-3.32)	123	2.16 (1.80-2.58)	302	2.53 (2.25-2.83)

Statistical note: Rates are calculated for patients in England aged under 74 years– denominator data for rates calculation based on Hospital Episode Statistics mental health and learning disabilities admissions (6).

TABLE 12 : Frequency of sudden unexplained death by year and ethnicity

	1999	2000	2001	2002	2003	2004	2005	2006
White	33	41	27	35	42	39	39	43
Black and ethnic minority	4	1	5	6	4	6	3	6
Unknown ethnicity	0	1	0	1	1	1	0	0
Total	37	43	32	42	47	46	42	49

Statistical note: Data collection began on 1 March 1999

TABLE 13 : Frequency of all deaths within 24 hours and 1 hour of restraint by year and ethnicity

	2002		2003		2004		2005		2006	
	24 Hours	1 Hour	24 Hours	1 Hour	24 Hours	1 Hour	24 Hours	1 Hour	24 Hours	1 Hour
White	1	1	1	0	1	1	3	0	4	1
Black and ethnic minority	1	0	0	0	1	1	0	0	0	0
Not stated	0	0	0	0	1	0	0	0	0	0
Total	2	1	1	0	3	2	3	0	4	1

Statistical note: The 1 hour figures are included in the 24 hour figures.



5. UPDATE ON INQUIRY RESEARCH PROJECTS

5.1 Projects funded by the National Patient Safety Agency

5.1.1 Serious violence by people in the care of services

Study focus: An extension to the homicide inquiry, this study is examining a national sample of people convicted for serious violent offences who have had contact with mental health services. The aims are to:

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

The study is now in its final stages of data collection and is scheduled to be completed March 2010. On completion this study will provide information on the characteristics and service contact of patients committing serious violence offences with a view to informing guidance to services on the management of this population in the future.

5.1.2 People with mental ill health who are victims of homicide

Study focus: The relationship between mental illness and being a victim of homicide has not been researched in detail. The aims are to:

- estimate the number of people under mental health care who are victims of homicide
- identify the clinical and social antecedents that could be the basis of prevention.

The study is in the data collection phase and is scheduled to be completed March 2010. At present the Inquiry investigates mentally ill perpetrators of homicide but many victims are also mentally ill. Services are not generally aware of the risks that patients living in the community may face, and this study will highlight the opportunities to improve safety in this area.

5.1.3 The aetiology of in-patient suicide

Study focus: This project is studying the antecedents of suicide in three sub-groups of psychiatric in-patients: absconders, patients on



agreed leave, and patients under non-routine observation. The aim is to:

- identify the socio-demographic features, clinical characteristics and care variables for patients in each of the sub-groups.

The study is also in the data collection phase and is scheduled to be completed March 2010. On completion this study will help to inform suicide prevention strategies specific to the psychiatric in-patient setting and help to reduce the incidence of suicide among this patient population.

5.2 PROJECTS FUNDED FROM EXTERNAL SOURCES

5.2.1 Suicide in armed forces personnel (Funded by the Ministry of Defence)

A collaboration between the Inquiry and the Defence Analytical Services Agency (DASA) and Service Personnel Policy has recently been completed. Discharge from military service in the United Kingdom between 1996 and 2005 was linked with details of suicides collected by the Inquiry. The study found that ex-servicemen under 24 years old were at greatest risk of suicide, with those in lower ranks and shorter military careers proving most vulnerable.

Possible reasons suggested for this finding included:

- those entering military service at a young age are already vulnerable to suicide and those serving for a relatively short period of time before being discharged were most likely to take their own lives
- the difficulty a minority of individuals experience making the transition to civilian life
- exposure to adverse experiences during military service or active deployment played a role in the two to three-fold increase in suicide among young veterans, although many of those most at risk had not completed basic training and therefore had not been deployed overseas.

The main findings received widespread media coverage. An academic paper based on the study was published in March 2009 (9).

5.2.2 Suicide in the deaf community: a literature review (Funded by the Big Lottery)

A collaboration between the Inquiry and the National Society for Mental Health and Deafness (Sign). There is limited data on the rate of suicide in the deaf population. The findings of the review were:



- risk factors for suicide in the deaf community did not differ systematically from those in the hearing population
- clinicians should be aware of a possible association between suicide and deafness
- specialist mental health services designed to be more accessible to people who are deaf should be developed
- specific suicide prevention strategies may be of benefit for this population.

An academic paper based on the study was published in 2007 (10).



6. RECENT REPORTS AND PAPERS FROM THE INQUIRY

For a full list of Inquiry reports and publications see the Inquiry website. (<http://www.manchester.ac.uk/nci> - Inquiry publications).

Hunt, I.M., Kapur, N., Webb, R., Robinson, J., Burns, J., Shaw, J., & Appleby, L., Suicide in recently discharged psychiatric patients. *Psychological Medicine* (2009) 39, 443-449.

Hunt, I.M., While, D., Windfuhr, K., Swinson, N., Shaw, J., Appleby, L. & Kapur, N. Suicide pacts in the mentally ill: a national clinical survey. *Psychiatry Research* (2009) 167, 131-138.

Kapur, N., While, D., Blatchley, N., Bray, I. & Harrison, K. Suicide after leaving the UK armed forces – A cohort study. *PLoS Med* 6(3) (2009): e1000026 doi:10.1371/journal.pmed.1000026.

Purandare, N., Oude Voshaar, R., Rodway, C., Bickley, H., Burns, A. & Kapur, N. Suicide in dementia: 9-year national clinical survey in England and Wales. *British Journal of Psychiatry* (2009) 194, 175-180.

Roscoe, A., Rodway, C., Mehta, H. While, D., Amos, T. Kapur, N., Appleby, L. & Shaw, J. Psychiatric recommendations to the court as regards homicide perpetrators. *Journal of Forensic Psychiatry* (2009) 20, 366-377.

Windfuhr K, While D, Hunt I, Turnbull P, Lowe R, Burns J, Swinson N, Shaw J, Appleby L, & Kapur N. Suicide by Juveniles and Adolescents in the United Kingdom. *The Journal of Child Psychiatry* (2008) 49, 1155-1165.

Rodway, C., Flynn, S., Swinson, N., Roscoe, A., Hunt, I., Windfuhr, K. Kapur, N., Appleby, L. & Shaw, J. Methods of homicide in England and Wales: a comparison by diagnostic group. *Journal of Forensic Psychiatry and Psychology* (2008), doi:10.1080/14789940802360870.

Flynn, S., Swinson, N., While, D., Hunt, I., Roscoe, A., Rodway, C., Windfuhr, K., Appleby, L. & Shaw, J. Homicide followed by suicide: a cross-sectional study. *Journal of Forensic Psychiatry and Psychology* (2008), doi:10.1080/14789940802364369.

Large, M., Smith, G., Swinson, N., Shaw, J. & Nielszen, O. Homicide due to mental disorder in England and Wales over 50 years. *British Journal of Psychiatry* (2008) 193, 130-133.



7. REFERENCES

- 1 Appleby, L., Kapur, N., Shaw, J. et al. (2006). Avoidable Deaths: Five year report of the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness. Online: <http://www.medicine.manchester.ac.uk/psychiatry/research/suicide/prevention/nci/reports/>
- 2 Mid-year Population Estimates. Office for National Statistics. <http://www.statistics.gov.uk/>
- 3 Home Office. <http://rds.homeoffice.gov.uk/rds/>
- 4 National Suicide Prevention Strategy for England. Annual Report 2007. National Institute for Mental Health in England, published April 2008. Further information: <http://nmhdu.org.uk/>
- 5 Mental Health Minimum Dataset. Online: <http://www.ic.nhs.uk/services/mental-health/mental-health-minimum-dataset-mhmds>
- 6 Hospital Episode Statistics. <http://www.hesonline.nhs.uk>
- 7 NHSE SN (2002) 01: Cubicle rail suspension system with load release support systems. Online: http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Estatesalerts/DH_4122863
- 8 Kapur N., Hunt I.M., Webb R., Bickley H., Windfuhr K., Shaw J. & Appleby L. Suicide in psychiatric in-patients in England, 1997 to 2003. *Psychological Medicine* (2006); 36: 1485-1492.
- 9 Kapur, N., While, D., Blatchley, N., Bray, I. & Harrison, K. Suicide after leaving the UK armed forces – A cohort study. *PLoS Med* 6(3) (2009); e1000026 doi:10.1371/journal.pmed.1000026.
- 10 Turner, O., Windfuhr, K. and Kapur, N. Suicide in the deaf population: a literature review. *Annals of General Psychiatry* (2007); 6, 26.



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National Patient Safety Agency

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