

## Suicide and Other Unexpected Deaths among Psychiatric In-patients The Bristol Confidential Inquiry

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By matching information collected from coroner inquest records with hospital admission and discharge registers, 27 suicides and 5 other unexpected deaths were identified over 30 months among persons who either were psychiatric in-patients at the time or had been up to eight weeks previously. The relevant consultant completed a questionnaire concerning assessment and management in each case. It is suggested that such an approach might usefully be adopted widely as an audit of unexpected deaths. In 20 of the suicides the seriousness of the risk was not fully recognised; 13 absented themselves from the hospital ward without leave. Misleading clinical improvement in the absence of corresponding alleviation of situational problems, and patient alienation appeared important hazards. The findings have implications for service development, particularly when major reduction of bed numbers is planned.

Unexpected death among in-patients is an important theme in evaluation of any psychiatric service. Crammer (1984) drew together the findings from studies in several countries and alerted psychiatrists to the worrying fact that during 1950–74 the in-patient suicide rate in Finland, Norway, Sweden and Switzerland increased significantly, even though the rates for the general population remained unchanged. Sainsbury (World Health Organization, 1982) has commented on a similar picture in both the Netherlands and England.

The exact significance of these findings is not clear; although changes from the custodial locked-ward approach to more open liberal regimes may be relevant, an equally plausible explanation may be that psychiatric patients now remain in hospital for shorter periods of time, and are now more acutely ill and at greater risk than in previous decades (Wolfersdorf *et al*, 1988). Either way, the numbers of such unexpected deaths are increasing in our hospital wards and they need to be investigated more fully.

The present study describes the survey of all unexpected deaths among those who had been psychiatric in-patients in Bristol during two and a half years and evaluates its potential as an audit procedure which might be adopted more widely.

### Method

The study originated at the initiative of the Royal College of Psychiatrists, forming part of a multicentre confidential survey of psychiatric in-patient deaths. All such deaths in the city of Bristol that were categorised at coroner's inquests as due to suicide, misadventure, accident, natural causes, or that received open verdicts, were noted between 1 April 1982 and 30 September 1984. At the same time, discharge

and death statistics at the three National Health Service (NHS) hospitals which admitted all psychiatric in-patients throughout the area were monitored. Those aged 18–75 years who were identified in the way described, who were receiving psychiatric in-patient treatment at the time of death, or had been discharged from such care less than two months previously, became the subjects of the study.

The relevant consultant psychiatrist was asked to complete for each patient a questionnaire which sought information concerning key demographic and clinical data. It first dealt with medical and psychiatric history, including the diagnosis and details of treatment received during the final illness. Its second part focused on the mode, circumstances and place of death, recent life events, the hospital ward, and the care procedures used, particularly the way in which suicide risk was perceived and managed. Finally, opportunity was provided to comment on whether any general lessons might be learned from the patient's death.

### Results

The 27 patients whose deaths were judged on clinical grounds to have been suicide and the five with unexpected deaths due to other causes are listed in Table 1, which also provides details of their demographic and clinical characteristics. The coroner's verdict had been suicide in only nine. Of the remainder, 16 received open verdicts, one misadventure, and one accidental. There were 11 men (average age 51 years; range 30–72 years) and 16 women (average age 47.4 years; range 29–73 years). Only a minority were aged 60 years or more (32% of women, 27% of men), and a considerable proportion (50% of women, 46% of men) were aged 40 years or less. The overall annual suicide rate was: men 1.4, women 2.2, per 100 000 general population aged 18–75 years.

Of the whole series 18 had married at some time, but only seven were still living with a spouse. Of the others, five were divorced and five widowed (in one the marital status was unknown).

Although responses were not categorised in more than general terms, some form of depressive illness was present

Table 1  
Demographic and clinical characteristics of in-patients and recent in-patients receiving a *clinical* verdict of suicide<sup>1</sup> or of unexpected death

Case no.	Age: years	Sex	Marital status <sup>2</sup>	Diagnosis	No. of previous psychiatric admissions	No. of previous episodes of DSH <sup>3</sup>	Status at time of death	Location of death	Cause of death
<i>Suicide</i> 1	39	M	S	Depressive illness with episodic alcohol problem	7	10	In-patient, AWOL <sup>4</sup> 1 day	Hospital grounds	Alcohol excess, aspiration of vomit
2	39	F	?	Depressive illness	0	0	In-patient	Hospital ward	Asphyxiation (plastic bag)
3	49	M	S	Depressive illness	0	0	Out-patient for 3 weeks	Home (garage)	Overdose and carbon monoxide
4	51	F	W	Depressive illness	1	2	In-patient, AWOL 2 hours	Home	Burning
5	29	F	S	Personality disorder	7	Numerous (petty)	In-patient on leave	Community	Overdose
6	35	M	S	Chronic paranoid schizophrenia	1	1	In-patient	Hospital ward	Burning
7	58	M	M	Depressive illness	8	4	In-patient AWOL 1 day	Community	Overdose of aspirin
8	28	F	D	Anorexia nervosa/bulimia	2	3	In-patient, AWOL 3 days	Community	Overdose of aspirin, carbon monoxide
9	73	F	M	Personality disorder	Many	Many 'gestures'	In-patient, AWOL some hours	River near hospital	Drowning
10	65	F	W	Depressive illness	1	1	In-patient, AWOL 2 hours	River near hospital	Drowning
11	30	M	S	Obsessive-compulsive neurosis	10	1	Out-patient for 7 weeks	Community	Overdose
12	47	M	D	Depressive illness	3	2	In-patient, AWOL	Hospital grounds	Hanging
13	64	F	M	Depressive illness	1	1	Out-patient for 9 days	Community	Jumped off high building
14	70	M	W	Depressive illness, with alcohol problem	0	1	Day patient for 8 days	Community	Jumped under train
16	29	F	D	Depressive illness	1	1	Out-patient for 3 days, against advice	Community	Jumped from suspension bridge
18	37	F	M	Puerperal psychosis	3	0	Out-patient for 10 days, against advice	Community	Jumped from high building
20	40	M	S	Dementia (alcohol-related?)	1	0	In-patient, AWOL some hours	Community	Jumped off cliff
21	57	F	M	Depressive illness	2	1	In-patient, AWOL some hours	River near hospital	Drowning
22	53	F	W	Schizophrenia	2	1	In-patient, AWOL	River near hospital	Drowning
24	71	F	D	Paraphrenia	10	4	In-patient	Hospital ward	Burning

*continued*

Table 1 (continued)

Case no.	Age: years	Sex	Marital status <sup>2</sup>	Diagnosis	No. of previous psychiatric admissions	No. of previous episodes of DSH <sup>3</sup>	Status at time of death	Location of death	Cause of death
25	72	M	M	Depressive illness/dementia	1	0	In-patient, AWOL some hours	Hospital grounds	Hanging
26	32	F	D	Schizophrenia/depression	Several	3-4	In-patient, AWOL 1 day	Community	Jumped from railway bridge
27	31	F	S	Personality disorder	2	3	In-patient on leave for 6 days	Community	Overdose
28	60	M	M	Depressive illness	0	5	In-patient, AWOL	Hospital grounds	Hanging
30	64	F	W	Paranoid schizophrenia	15	8	In-patient on leave for some hours	Docks near hospital	Drowning
31	31	M	S	Chronic schizophrenia	9	0	In-patient on leave for some hours	At home	Jumped out of building
32	38	F	M	Depressive illness	0	0	Out-patient for 4 weeks, against advice	At home	Stabbing
<i>Deaths other than suicide</i>									
15	33	M	S	Chronic schizophrenia	23	4-6	Day patient	At home	Head injury (from a fall?)
17	55	M	M	Post-operative confusional state	0	0	In-patient, AWOL, 1 day	River near hospital	Drowning
19	37	F	S	Alcohol problem (IQ 80)	Many	0	Out-patient for 1 week	At home	Burning
23	62	M	S	Personality disorder	10	0	In-patient on ground leave	Hospital grounds	Exposure, pneumonia
29	33	M	S	Schizophrenia/mental handicap	3	0	In-patient on leave	Community	Road traffic accident

1. Only nine received a coroner's verdict of suicide.

2. S, single; W, widowed; M, married; D, divorced.

3. DSH, deliberate self-harm.

4. AWOL, absent without leave.

in 14. Other diagnostic categories featured less commonly; some form of schizophrenic illness was reported in six, personality disorder in three, dementia in two (one of whom also had a depressive illness) and individual patients suffered from puerperal psychosis, obsessive-compulsive disorder or anorexia nervosa/bulimia. It is surprising that excessive alcohol intake was mentioned in only three patients, and none was given a formal diagnosis of alcohol dependence.

#### Clinical history

Fifteen were described as physically well. Significant physical illness was present in six, all of whom were aged 60 or more. This included diabetes mellitus (case 9), essential hypertension (case 13), severe chronic obstructive airway disease (case 14), carcinoma of throat (case 25), carcinoma of rectum leading to colostomy and radiotherapy one year previously (case 28), and bronchial asthma (case 30). The

use of drugs for the treatment of physical disease was reported in only four patients (case 9, insulin; case 13, alpha methyl dopa, propranolol; case 14, prednisolone, steroid inhalers; case 30, salbutamol and steroid inhalers). The remaining five patients had various somatic symptoms in the absence of demonstrable organic disease.

All except two patients had received some form of antidepressive drug, minor or major tranquillisers during the recent illness. Only three patients had been treated with electroconvulsive therapy during their final illness: case 9 had eight, case 25 had five, and case 28 had seven applications respectively, all within the previous six months.

In eight cases, the first episode of psychiatric illness had commenced some time within the previous year, in eight between three and ten years, and in 11 ten years or more earlier. Twenty-two had previously been admitted for psychiatric treatment. Twenty had a history of deliberate self-harm; further details of the pattern of this behaviour

were not obtained, although the information available suggests that it was viewed in various ways, from many minor 'gestures' (cases 5, 9, 26) to recent serious life-endangering episodes (cases 12, 27, 28, 30).

The recent in-patient stay had lasted for two months or less in 19, and six months or less in 24. The series represents all psychiatric hospitals serving the city of Bristol and it is therefore reasonable to conclude that only three suicides among psychiatric in-patients were those who had been in hospital for six months or more.

The few key items which were included in the questionnaire dictate the type of data obtained. As a group, social difficulties seemed prominent: 19 were described as having few friends and/or being socially isolated. The critical attitude of others is manifest in the responses, which judged 13 to be complainers, and seven to be both complaining and manipulative. When taken together with two patients whose wives refused to have them home (cases 7, 28) it is seen that 15 had become alienated in some degree from others.

#### Method and location of suicide

The range of methods used in suicide are detailed in Table 1. They include drug overdose, jumping, hanging, drowning, burning, stabbing and asphyxiation with a plastic bag. All five episodes of drowning were by women. The three hangings were all by men and all occurred in hospital grounds. Of the three suicides that took place in the hospital ward itself, two were by burning, and one by asphyxiation with a plastic bag.

Six had been discharged from in-patient status and these patients committed suicide in the community between three days and seven weeks after leaving hospital. A conventional hospital survey of suicides might not have detected them. Three of these (cases 3, 11, 13) had been seen in the out-patient clinic and suicide risk had been judged to be minimal. Three others (cases 16, 18, 32) had not attended after discharging themselves against advice, in one of these problems having arisen in making an urgent out-patient appointment. One was a day patient.

Four in-patients committed suicide while on leave which had been agreed with hospital staff. Sixteen others were still of in-patient status at the time they committed suicide: nine absented themselves without warning from their hospital ward to commit suicide away from hospital, three did so in the ward itself, and four in the hospital grounds.

Taking the series as a whole, only seven committed suicide within the hospital environs.

#### Ward management and patient response

Inquiry was made about the assessment of suicide risk and whether special precautions were taken. The questionnaire did not specify the precise time when these were used, and as a result only limited conclusions can be drawn concerning the efficacy of such ward management. In 20 the question of suicide risk had been discussed at some time, but only in 11 had precautions been taken to prevent it. Eleven were eventually allowed on leave, or discharged to day-patient

or out-patient status, with the implication that suicide risk was not considered sufficiently serious and immediate to insist on in-patient care.

These findings convey the general impression that although suicide risk was recognised in the majority of patients in the series, only six being quite unexpected, its serious significance was recognised in only a minority. The fact that almost two-thirds of those still of in-patient status committed suicide after absenting themselves without permission also underlines this impression.

Significant clinical improvement had occurred in 14, but in 12 of these it was clear that current problems had remained unresolved.

In all patients except five, suicide was in the setting of misleading clinical improvement with or without alienation as judged by comments that the patient was complaining and/or manipulative. On looking at each of these five individually, possible reasons why suicide prevention failed in each case became apparent. Case 8, suffering from anorexia nervosa and bulimia, was a member of EXIT (an organisation promoting voluntary euthanasia) and regarded as a suicide risk, but a bank holiday seriously impaired the efficiency of ward communication and she absconded herself from a ward outing. Case 10 remained on an open ward because it was considered that the only ward capable of providing sufficient security was intolerable for voluntary patients. Case 12 was regarded as needing constant observation but still went absent without leave to commit suicide by hanging in the hospital grounds. Case 20 seemed clinically well but had insight into a progressive dementia; his suicide was probably well planned and his intention kept private from those who treated him. Case 27 was recognised as being at suicide risk but was allowed to discharge herself against advice because the diagnosis was considered to be personality disorder, with the implication that detention under a Mental Health Act provision was not appropriate.

Problems of ward management were mentioned only in a minority of patients. In six the consultant and/or normal ward doctor were away. In two others there had been changes of senior nursing staff, in one change of status to day care and in one a move to a rehabilitation ward. For the anorectic patient, the bank holiday may have been an important factor in failure to ensure appropriate supervision, the patient being allowed to go on a ward outing inappropriately. Specific mention was also made in one that resuscitation after asphyxiation with a plastic bag had been difficult because only one nurse was available.

It is likely that the questionnaire did not explore problems of ward management in sufficient detail, and its further development should also include the views of nurses concerning adequacy of staff levels, patient behaviour and other practical ward issues.

#### Deaths other than suicide

There were five deaths which could not be categorised as suicide (Table 1).

Case 15 had attended day care erratically during the one month following discharge from in-patient status. Communication with hospital staff had been impaired by staff leave. A grand mal convulsion had occurred during

in-patient stay, and it was thought that he may have hit his head as a result of an epileptic fit at home.

Case 17 had sustained ischaemic brain damage following cardiac arrest during a Trendelenburg operation. Subsequently he was confused, disorientated and aggressive. He eventually left the ward without permission and was subsequently found drowned in a nearby river. He was considered too confused to form suicide intent.

Case 19 was at home when she died in a fire which burned down her house. She had not been considered a suicide risk, and the death was judged to be accidental.

Case 23 left the ward with permission to go for a walk one winter Sunday afternoon. The next day he was found dead near the hospital boundary. He had serious respiratory problems (asthma and aspergillosis) and death was thought to be due to exposure. He had not been considered a suicide risk, and a search was not initiated that same day.

Case 29 had been judged well at the time of the weekend leave in which he crashed the family car and was killed. He had not been considered to be a suicide risk and the death was regarded as accidental.

### Discussion

A review such as that which is described here is essentially an audit of unexpected deaths as they occur in psychiatric patients, either during their stay in hospital or within two months of discharge. It needs to be evaluated both in terms of its feasibility as well as the usefulness of the information obtained concerning problems encountered in the assessment and management of suicidal patients.

Although the study was carried out with the help of a specially designated research worker, the procedures necessary at any single hospital which might adopt this kind of audit of unexpected deaths are not grossly demanding of time. Once the local coroner has allowed the collection of basic data concerning inquests (and such information could be obtained quite easily without significant extra demands on staff) then all that remains is for the hospital records department to maintain a register of unexpected deaths as they become known and for psychiatrists to complete a questionnaire concerning each unexpected death as it becomes identified through the data arising from the hospital and coroner's office. Identification of deaths through the inquest data should obviate any selective recall on the part of clinicians. It also detects suicides by patients after their discharge from hospital; in the case of the present study up to eight weeks later. In this series six patients fell into this category. The importance of including this group is obvious: they otherwise are not always reported to hospital staff, although their death is relevant to any evaluation of treatment which they received previously in hospital.

The type of information obtained depended upon the format of the questionnaire, which itself requires further development and refinement. The retrospective approach was the only feasible one given the low base rate of unexpected deaths in psychiatric patients. It suffers from all the potential unreliability of inquiry after the event, and this is particularly true of suicide which has such traumatic impact upon staff members that recollection of it is likely to be distorted in some way. The topics covered in the questionnaire were therefore deliberately focused as much as possible on factual matters concerning clinical care and events, much of which would already have been recorded in the patients' notes. Further research now under way attempts to improve data reliability by utilising face-to-face interviews, direct scrutiny of patients' notes, and by interviewing nursing staff as well as psychiatrists. Several themes however have already emerged from the present study concerning the assessment and management of suicide risk as it is encountered among psychiatric in-patients, and much of this should be of value at hospital level as a basis for clinical review procedures subsequent to unexpected deaths.

The findings that about half the suicide patients in this series were aged 40 or less and that there were more women than men are consistent with other studies concerning psychiatric in-patients who commit suicide (Copas & Robin, 1982). Some form of depressive illness, although the most common diagnostic category, was present in about half of all patients. Such findings undoubtedly reflect the age and sex structure of in-patient populations and selection factors which enter into the process of hospital admission. Nevertheless, they demonstrate how grossly misleading traditional suicide risk factors derived from national statistics can be in attempting to identify, during day-to-day clinical practice, those psychiatric in-patients who are at greatest risk. Whatever selective factors may be present, it is still worth noting that of the eight patients aged over 60 years, six had major physical illness.

Twenty-two (81%) patients in this series had received psychiatric in-patient treatment at some time in the past, and 20 (74%) had a history of deliberate self-harm. They were therefore well known to the psychiatric services. Suicide risk had been discussed recently in 21 (78%), and in only 6 (22%) was the event of suicide quite unexpected. Why was it not possible to prevent suicide in these patients?

In only 11 were special precautions taken at ward level to prevent suicide. This suggests that in the circumstances that applied at the time, the seriousness of the suicide risk was not recognised.

Eleven had been allowed on leave, or discharged from in-patient status. Of the remaining 16 who had continued as in-patients, 9 had left the ward without permission in order to commit suicide away from the hospital. Only three committed suicide in the hospital ward itself and four in the hospital grounds. There is no reason to conclude that the patients in this series received other than meticulous care; they were assessed regularly and treatment procedures were without fault. Yet in the majority the seriousness of suicide risk was either not recognised or precautions to prevent it failed. Two relevant themes emerged which might explain why this happened.

In 14 (51%) significant improvement in the clinical state had clearly occurred. In 12 of these, however, current problems had remained unresolved. This might be an important pitfall in the management of patients in hospital, removed as they are from the life difficulties which may have played a part in leading to suicidal despair. Misleading improvement of this kind in patients who proceed to commit suicide has been mentioned by Goh *et al* (1989), who suggested that resolution of internal conflict might also be an explanation for superficial improvement. Another important theme relates to the finding that the patients in this series were often regarded as complaining and/or manipulative, thereby being the subject of critical comments and negative judgements. Altogether 15 (55%) had become alienated in some way, in the sense that they had clearly lost the support of others. These findings are not new. Morgan (1979) has described elsewhere a process which he terms 'terminal malignant alienation' of patients who proceed to kill themselves. This refers to a sequence of events, often related to recurrent relapse and failure to respond to treatment, in which such patients experience profound loss of sympathy, even antipathy, from staff and probably relatives alike, who commonly invoke deliberate manipulation, assumption of symptoms, or overdependency.

In the present series, misleading clinical improvement with or without alienation appeared relevant in 22 (81%) patients, possibly contributing to the failure to recognise the seriousness of suicide risk. These appear to be important issues relevant to clinical management of suicide risk that require to be understood further and appropriate management strategies established. Undoubtedly, misleading clinical improvement and alienation occur in patients who do not proceed to suicide; further research should address the problem of identifying more clearly the circumstances in which they represent indicators of serious and imminent suicide risk. The findings suggest that suicidal patients should not be discharged until situational factors have been

addressed. Mere improvement of symptoms is an insufficient discharge criterion. These considerations are of obvious importance at the present time when major reduction of bed numbers is contemplated in service development, leading to reduction in length of in-patient stay.

Few conclusions can be drawn from the present study with regard to problems at ward level in the management of those patients who were judged to be actively suicidal. Communication difficulties, disruption during bank holidays, low levels of available staff or absence on leave were mentioned in a few instances. Ideally, an audit of this kind should include the opinions of nursing staff, if these and other matters relating to patient behaviour on the ward are to be addressed adequately. The high numbers of patients in the present series who committed suicide after absenting themselves without permission from hospital wards does suggest however that current procedures in the day-to-day management of suicidal patients should be looked into further.

Not all suicides can be prevented and it would be quite wrong to suggest otherwise. Nevertheless, audit procedures such as those described in this paper can identify important issues concerning assessment and management that should be confronted if we are to reduce the number of suicides among psychiatric in-patients to those that really are unavoidable.

The present survey identified five unexpected deaths which were probably accidental. Important themes also emerged concerning these patients, such as problems of communication either with patients who were on leave, or between staff members themselves, all relevant to clinical management and effective monitoring of patients' progress.

Research into suicide has paid little attention in recent decades to the day-to-day problems of clinical management of individuals at risk. The European symposium held by the German Society for the Prevention of Suicide (Moller *et al*, 1988) included only one contribution, that by Retterstol, in which problems relevant to the day-to-day ward care of suicidal patients were considered. The present paper suggests that the clinical management of psychiatric in-patients who commit suicide, as well as those who die otherwise unexpectedly, is a deserving topic for audit review. The approach here described represents a useful first step in the systematic evaluation of these basic issues in day-to-day patient care.

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