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Suicide in Bristol

By C. P. SEAGER and R. A. FLOOD

"That the deceased took his life while the balance of his mind was temporarily disturbed" has been the Coroner's traditional verdict in cases of suicide; a verdict adopted to circumvent retribution by society and particularly to allow of burial in consecrated ground and avoid forfeiture of property to the Crown (Williams, 1958). There is a distinction between such a finding with its legal import and that of the psychiatric assessment, and this must necessarily affect psychiatric studies undertaken in the endeavour to understand the state of mind of the person who encompasses his own death, or to examine the wider implications of suicide in relation to the epidemiology of mental illness. Public opinion and cultural pressures have their effects on coroners' verdicts; and guilt or shame on the part of relatives or medical attendants may result in distortion or concealment of information.

In spite of these difficulties, reports of suicide statistics based on coroners' verdicts show a considerable degree of uniformity. Provided that their limitations are kept in mind, their study is profitable in understanding some of the problems of mental illness. Recent studies in this country have concerned London (Sainsbury, 1955) urban populations (Stengel and Cook, 1961; Jennings and Lunn, 1962), and comparisons between urban and rural populations (Carstairs and Brown, 1958; Capstick, 1960). In these studies, however, no specific attention was paid to the clinical records of any known patients.

The present study has been carried out in the Bristol clinical area where there was a unified psychiatric service based on two mental hospitals and a day hospital. It was, therefore, comparatively easy to obtain relevant hospital records. An ecological survey of mental illness (Hare, 1956) covering the same area during the period 1949–53 was an added advantage as, although there may have been some changes in the intervening years, it provided a base line from which to work.

The records of privately treated patients were not sought but, as the ecological survey showed, only 3·8 per cent. of patients had received such treatment. The number of these who may ultimately have committed suicide is small enough not to affect the general conclusions.

Method

With the kind permission of Her Majesty's Coroners in the districts of South Gloucester, Bristol, and North Somerset, the records of all inquests on suicides were examined, including the inquisitions of witnesses and reports of post mortems carried out, for the five-year period 1957–61 inclusive. For one year, 1959, records of all inquests in the Bristol area were examined to ascertain the number of cases in which there was some doubt about suicide and where misadventure or accidental death was the final verdict.

Where the reports indicated that the individual had been under hospital care, the records of the Bristol Mental Hospital Group were examined and appropriate information extracted concerning treatment and its temporal relationship to the suicidal attempt. Out-patient records were also examined where relevant.

An attempt was also made to check hospital records against all the suicides, and additional information was obtained in a small number of cases.

Coroners' records were examined for information concerning physical illness, mental illness, symptoms and signs suggestive of mental illness, and post-mortem examinations. Based on this and information obtained from the psychiatric records, it was possible to make a clinical diagnosis.

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Results

The following results are based on a population at risk of approximately 810,000 (Registrar General's Report, 1961) with 580,000 living in urban and 230,000 in rural areas. This population comprises those people who are likely to attend psychiatric hospitals in the Bristol clinical area; namely, those living in Bristol itself, and those in North Somerset and South Gloucestershire.

Eight requests had to be made to psychiatrists outside the Bristol area, and it seems likely that the histories of all the suicides who attended for psychiatric assessment or treatment are known. It has not been possible to include in the survey any patients who attended for psychiatric treatment in the area but who committed suicide outside the jurisdiction of the Coroners concerned.

Personal Information

There were 325 suicides recorded during the five-year period under study. The overall incidence of suicide during the period is 8·0 per 100,000 annually. The ratio of urban to rural is 252 to 73 giving annual rates respectively of 8·7 and 6·2 per 100,000 (Table I).

The ratio of the male to female suicide rate is much higher in the urban population, namely 8·9 to 4·2 per 100,000, than in the rural areas where it is 9·7 to 7·2 per 100,000. The reason for this is not clear. There is no evidence of social isolation in the rural male population. Only seven were living alone, while 28 were married, and the remainder lived with relatives or friends. Capstick (1960) comments on the wide disparity of male to female ratios in different rural areas.

Age group and sex distribution are shown in Table II, and Table III shows distribution according to social class.

Table IV shows the marital status of the person at the time of suicide. The male to female ratio is above unity in all cases except that of the

Table I
Urban/Rural Domicile

	Urban		Rural	
	No.	Annual Rate per 100,000	No.	Annual Rate per 100,000
Male	140	9·7	49	8·9
Female	112	7·2	24	4·2
Total	252	8·4	73	6·3

Table II
Age Groups and Sex Distribution

Age	Male		Female		Total	
	No.	Annual Rate per 100,000	No.	Annual Rate per 100,000	No.	Annual Rate per 100,000
Less than 20 ..	2	0·3	1	0·2	3	0·2
20–29	9	3·6	5	2·0	14	2·8
30–39	21	7·9	15	5·6	36	6·9
40–49	27	9·9	22	8·0	49	9·0
50–59	59	23·4	38	14·4	97	18·9
60–69	39	24·4	42	18·1	81	20·6
70–79	23	25·4	11	7·2	34	13·9
80+	9	31·0	2	4·8	11	15·6
Total	189	9·6	136	6·5	325	8·0

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TABLE III

Social Class Distribution

Social Class	Male	Annual Rate per 100,000 (Male)	Female	Total
I	4	9·4	4	8
II	23	11·3	19	42
III	47	6·8	40	87
IV	67	37·0	55	122
V	48	27·3	18	66
Total	189	9·6	136	325

The rate is available only for occupied and retired males over the age of 15 (National Census, 1951).

widowed; this reflects the greater number of widows to widowers in the population since the rates for widowers are extremely high, while those for widows, although higher than other groups of females, are not greatly so. There were 167 (6·4 per 100,000) married as against 158 (7·7 per 100,000) without spouses (i.e. single, divorced, or widowed) confirming the view that the socially isolated are a greater risk, and that this is particularly so when isolation results from loss rather than from choice (Table IV).

The vast majority of the suicides had members of their family alive and were usually in contact with them: 35 (10·8 per cent.) had parents living and all but 2 were in contact; 167 (51·4 per cent.) were married and living with the spouse, 12 (3·7 per cent.) were not in contact; 59 (18·2 per cent.) had children and 8 (2·5 per cent.) were not in contact; 50 (12·4 per cent.) had siblings and 7 (2·2 per cent.) were not in contact; 4 (1·2 per cent.) had other relatives; 14 (4·3 per cent.) had no relatives mentioned.

These figures imply a minimum contact in that many had more than one set of relatives in contact—e.g. parent, wife, and children. 104 (32·0 per cent.) of the suicide subjects were considered to have relatives dependent on them to a greater or lesser extent. This would include other members of the family dependent on their income and also, in the case of the housewife, dependent on her for running the house.

Sixty-six (20·3 per cent.) of the patients were living alone—27 (8·3 per cent.) female and 39 (12·0 per cent.) male. The main reason for the men living alone was because they were unmarried, there being 16 single men and 14 widowed; for the women it was widowhood, there being only 9 single women and 17 who were widowed. Most of the subjects living alone lived in a house or flat but 3 were noted as of no fixed abode, one being at the time in prison.

As far as deciding about regular employment was concerned, difficulties arose with the problem of the housewife. For men it was usually possible to ascertain whether they were in regular employment, out of work, or retired,

TABLE IV

Marital Status

Marital Status	Male	Annual Rate per 100,000	Female	Annual Rate per 100,000	Total	Annual Rate per 100,000
Single	39	4·6	30	3·0	69	4·1
Married	103	9·9	64	6·1	167	8·0
Widowed	35	61·1	40	17·7	75	26·3
Divorced and Separated ..	12	144·4	2	13·6	14	60·9
Total	189	9·6	136	6·5	325	8·0

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and this was also true in the case of some women; otherwise women were noted as "housewife" unless there was evidence that they were unable to cope with normal household activities.

151 (46·5 per cent.) of the suicides were in employment, of whom 32 were females, and in addition 86 (26·5 per cent.) were considered to be housewives running their homes in an everyday manner. This would include widows living alone. Of the remainder, 11 (3·4 per cent.) were out of work, 68 (20·9 per cent.) had retired, 4 of them being under the age of 50, and the rest had reached retiring age. The remainder were either students (2 cases), of independent means (6 cases), or the occupation was not ascertainable (9 cases).

Medical History

In 65 cases (20·0 per cent.) there was some evidence of physical ill health, sufficient to cause discomfort to the patient and interfere with the normal way of life. In 51 cases this was considered to be long-standing, and unlikely to cause death within the subsequent 6 months. Examples are epilepsy, Parkinsonism, chronic bronchitis and hypertension. Fourteen patients had severe illnesses which would be likely to cause their death within the next 6 months; e.g. carcinoma at various sites, severe cardiac failure.

Most of this group of patients, with either long-standing or lethal illness, were considerably disabled by their physical ill health. In 47 (11·4 per cent.) cases it was thought highly likely that it at least contributed towards the idea of committing suicide. In the remainder there was no evidence that the patient was particularly concerned with his illness.

In 3 cases the post-mortem examination showed that the suicide had been pregnant, and in 2 of these cases the pregnancy was illegitimate.

Psychiatric Examination

Family History. There was a family history of mental illness in 33 (10·2 per cent.) cases. In 6 (1·8 per cent.) of these there was a history of attempted suicide and in 15 (4·6 per cent.), of suicide.

Previous Psychiatric Illness. A history of previous mental illness was obtained in 97 (29·8 per cent.) cases, 35 (10·7 per cent.) males and 62 (19·1 per cent.) females; the degree of illness was not assessed but was sufficient to warrant in-patient treatment. Of these, 38 (11·7 per cent.), 9 men and 29 women had made suicidal attempts and a further 14 (4·3 per cent.), 7 men and 7 women who had not had previous psychiatric treatment, had also made suicidal attempts. This refers only to attempts at least six months before the successful suicide. In all, 111 (34·2 per cent.) of the suicides had a history of either psychiatric admission or attempted suicide, and in many cases, both. Fifty-two (16·0 per cent.) had made previous suicidal attempts remote from the successful one. Although females formed only 41·9 per cent. of all the suicides, here they represent 64 per cent. of the patients with previous mental illness, and 70 per cent. of those who had made previous suicidal attempts.

Alcoholism. There were 5 reports (1·5 per cent.) of chronic alcoholism. This does not include those occasions in which alcohol was found in addition to barbiturates or other methods of suicide, since the reports were not sufficiently comprehensive to be sure that alcohol was mentioned in every case in which it had been taken.

Recent Psychiatric Illness. Eleven (3·4 per cent.) of the suicides took place while the patient was still in hospital, though not necessarily on hospital premises. In all these cases there was a history of previous psychiatric illness, and 4 had made previous suicidal attempts. Four (1·2 per cent.) other patients were attending the Day Hospital at the time of their suicide. Thirty-seven (11·4 per cent.) had had in-patient treatment within the preceding 6 months. In all, 52 (16·0 per cent.) patients committed suicide within 6 months of receiving psychiatric treatment.

It is apparent (Table V) that the suicides fall into two well defined groups. The first group consists of those in whom there is no history of previous psychiatric morbidity. The suicide is an early and may, indeed, be the first indication that there is anything wrong. Many of these are not psychiatrically ill and the suicide is a

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response to some well defined stress. Nevertheless, a number proved to have had psychiatric symptoms.

The second group are those in which there is a history either of past psychiatric illness, or of suicidal attempts. The striking difference between the two groups is the sex ratio, with the first group having a preponderance of men, and the second of women.

During examination of the Coroners' records, an assessment was made of reactive factors contributing to the suicide. These were: physical illness, either seriously incapacitating or likely to lead to an early death, loneliness due to bereavement, separation or divorce, alcoholism, and pending or recent court appearances. The evidence of such reactive factors in the group without previous psychiatric morbidity was considerably higher than in the group with a history of previous illness (Table VI). In the groups as a whole ($\chi^2=29\cdot1$, $p<0\cdot001$) and for the two sexes (Males $\chi^2=10\cdot0$, $p<0\cdot001$; Females $\chi^2=3\cdot8$, $p<0\cdot05$) the differences were highly significant.

Medical Attention

Seventy-six (23·4 per cent.) subjects were attending a doctor at the time of the suicide (that is, they had seen him within one week). A further 30 had been seen within two weeks and another 29 within four weeks. In all, 135 (41·4 per cent.) of the suicides had received medical attention during the four weeks prior to death. Of these, 35 (10·7 per cent.) were reported to have serious physical illness.

Only 4 out of 54 patients in the psychiatric

TABLE V

Relationship Between Recent and Remote Psychiatric Morbidity

	No Previous Psychiatric Morbidity			Previous Psychiatric Morbidity		
	Male	Female	Total	Male	Female	Total
Recent psychiatric morbidity ..	0	4 1·2%	4 1·2%	24 7·1%	35 10·4%	59 18·2%
No recent psychiatric morbidity ..	151 46·5%	68 20·9%	219 67·4%	14 4·2%	29 8·9%	43 13·2%
Total	151 46·5%	72 22·1%	223 68·6%	38 11·4%	64 19·7%	102 31·4%

TABLE VI

Reactive Factors in Suicide

	No Psychiatric Morbidity		Psychiatric Morbidity	
	Male	Female	Male	Female
Physical illness	36 11·1%	20 6·2%	3 0·9%	6 1·8%
Loneliness and bereavement ..	14 4·3%	8 2·5%	1 0·3%	8 2·5%
Court proceedings	15 4·6%	0	2 0·6%	0
Alcoholism	3 0·9%	0	1 0·3%	1 0·3%
Total	68 20·9%	28 8·7%	7 2·1%	15 4·6%

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morbidity group had physical illness and it is supposed, therefore, that the rest had been under observation for either recognized psychiatric illness, or physical complaints which were in fact due to psychiatric illness. It must be pointed out that the doctor concerned might be general practitioner, physician, surgeon, or psychiatrist and no distinction has been made, in this assessment, between them.

Attention is drawn to the fact that 12 (3·7 per cent.) patients who committed suicide knew that psychiatric out-patient appointments had been made for them. A similar problem has been reported by Carstairs (1962). Of the 12, four had had previous admissions to mental hospitals and two others had made a previous suicidal attempt. It was not possible to ascertain from the records whether compulsory admission procedures could have been utilized to deal with these patients, but it might indicate the need for an emergency psychiatric clinic to deal with each urgent problem in the way that the Emergencies Department of a General Hospital deals with accidents (Whiteley and Denison, 1963).

Suicidal Threats

Seventy (21·5 per cent.) patients had given a clear indication that they intended to take their own lives. This information was obtained from various witnesses, mainly relatives, and was a sufficiently clearly defined statement on the part of the suicide to be elicited in the Coroner's Court. There were no doubt other statements that either passed unnoticed by relatives or friends, or were not brought out in evidence. In many cases these threats were seriously taken, and in 36 (11·0 per cent.) cases the relative had sought medical help, or in some other way tried to take appropriate action although not successfully. Seven of the suicides had made attempts within the previous 6 months and 6 of these patients had been treated psychiatrically.

Physical Treatments

Six patients had received recent E.C.T. and one a leucotomy. One patient was nominally in hospital, but actually on leave, having completed a course of treatment. Three of the patients had been discharged less than a month previously, including the one who had had a leucotomy. No suicide occurred *during* a course of treatment—there was a clear interval, when the patient appeared well, between the last treatment and the suicide.

These findings do not support the view that there is a danger of suicide during the early stages of a course of electrical treatment where, although drive and volition have returned, the depressive thought content remains (Mayer-Gross *et al.*, 1960). The suicidal attempts occurring after initial recovery must be considered as indicating a relapse to the original condition.

Fifteen patients were reported to be on antidepressant drugs at the time of their suicide. It is much more difficult to assess the situation in these cases since information was not always available as to the type of drug, how long the patient had been on it, or the dosage given. Similarly, it is not possible to know whether other patients were receiving this type of drug but not recorded as doing so at the inquest. However, in view of the known uncertainty of action of these drugs, including the time taken to achieve effect if they are going to be beneficial, it is probable that these suicides represent a failure of treatment rather than that they fit into the pattern already described of persistence of depressive thoughts with the return of volitional activity.

The Act of Suicide

There were no particularly unusual features about the methods of suicide, which followed the general pattern noted in the Registrar General's Statistical Review (1961) (Table VII).

The relatively high number of deaths from falls is presumably due to the presence of Clifton Gorge and Suspension Bridge. While it retains its local reputation as a site for suicide bids, none of the deaths which occurred were those of people coming from a distance, so that there is no evidence to support the local belief that people come from all over the country to jump at this spot.

There are no essential differences between those who have previous psychiatric histories and those without, except for the incidence of death due to drugs. It is not altogether un-

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TABLE VII

Methods of Suicide

	Psychiatric Morbidity		No Known Psychiatric Morbidity		Total	
	Male	Female	Male	Female	Male	Female
Coal gas	13	31	62	47	75	78
Car exhaust	1	0	6	0	7	0
Drugs and poison	2	21	10	15	12	36
Hanging	6	0	28	3	34	3
Shooting	1	0	10	0	11	0
Drowning	3	7	9	5	12	12
Precipitation	7	3	17	3	24	6
Cut throat, wrists	3	1	9	0	12	1
Decapitation	2	0	0	0	2	0

expected that the proportion of deaths from drugs was significantly higher in those patients who were under regular psychiatric or medical care, or who had had previous psychiatric illness. There were 23 (22·5 per cent.) such suicides out of 102 compared with the suicides in which there was no previous psychiatric history, 25 (11·2 per cent.) out of 223 ($\chi^2=6{\cdot}99$, $p<0{\cdot}01$).

The differences between urban and rural suicides (Table VIII) suggest only that the question of opportunity and accessibility of lethal instruments plays a part. Thus shooting and drowning are relatively increased, though this may also be due to the larger representation of men in the rural figures.

Seasonal Incidence

A number of authors have drawn attention to the variation in the seasonal incidence of suicide. The present study corresponds with that reported by Sainsbury (1955) of suicides in the London area and the Registrar General's figures for England and Wales (1961) (Table IX).

Days of the Week

Suicides were found to fall much more frequently on weekdays than at weekends (Table X). This difference is the same for both sexes, although possibly more marked as far as the men were concerned. In the case of females there is one exception since Thursday shows the lowest incidence of suicides for females.

TABLE VIII

Methods of Suicide in Rural and Urban Areas

	Urban		Rural	
	Male	Female	Male	Female
Coal gas	66	71	9	7
Car exhaust	3	0	4	0
Drugs and poisons	11	23	1	13
Hanging	20	2	14	1
Shooting	4	0	7	0
Drowning	3	10	9	2
Precipitation	22	5	2	1
Cut throat, wrists	10	1	2	0
Decapitation	1	0	1	0
Totals	140	112	49	24

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The most likely reason for the difference at weekends is a question of opportunity. At the weekends with family about, the potential suicide has less chance of creeping away quietly and carrying out the deed, than during the week. This probably applies equally to both sexes, although during the week women may well be alone at home which would explain the lower variation. There is no particular local association with Thursday, such as early closing day or market day.

Time of Day of Suicide

In order to assess any relationship with times of day, the 24 hours were divided up into four periods. These were 6.00 a.m. to 12 midday, 12 midday to 6.00 p.m., 6.00 p.m. to 12 midnight and 12 midnight to 6.00 a.m. It was found that by far the greatest number of suicides occurred during the period 6.00 a.m. to 12 midday, there being 128 at this time, 52 in the afternoon, 47 in the evening and 61 during the night. In 37 cases it was impossible to ascertain the time of the suicide.

There are two explanations for this concentration of suicides in the morning period. Firstly, it may be due to the opportunities available when, for example, housewives are on their own after children and husbands have gone to work, or when older people are left alone while their relatives are out shopping. Secondly, it may reflect the diurnal variation in depressive illness, with the most severe depression occurring first thing in the morning. It was not possible to obtain information about an earlier period, such as 4.00 a.m. to 8.00 a.m., since information tended to be rather vague as to the exact time of the suicide and concerned, for example, the time of awakening of another member of the family.

Examining the figures for males and females separately, it is seen that the greatest proportion of women (43·4 per cent.) commit suicide during the morning period but, nevertheless, there is also a relatively high proportion of men (36·4 per cent.) who die at that time of day (Table XI). This suggests therefore that while the question of opportunity may well be of some importance in determining the time of day of the suicide, it seems much more likely that the diurnal variation of the illness is responsible for the majority of the morning deaths. This is borne out by the fact that the second highest

TABLE IX

Monthly Incidence of Suicide

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
No.	29	23	24	30	30	33	21	28	27	22	26	32	
%	8·9	7·1	7·4	9·1	9·1	10·2	6·5	8·6	8·3	6·8	8·0	9·8	Bristol
No.	35	23	27	39	55	38	28	31	29	28	39	37	London
%	8·6	5·6	6·6	9·5	11·0	9·3	6·9	7·6	7·1	6·9	9·5	9·0	(Sainsbury, 1955)
%	8·3	8·3	8·7	9·6	9·0	8·8	8·0	7·8	7·5	8·0	7·9	8·1	England & Wales (Reg. Gen., 1961)

TABLE X

Days of the Week of Suicide

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Not Known
Male ..	16	26	27	35	29	26	22	8
Female ..	13	21	18	24	10	28	13	9
Total ..	29	47	45	59	39	54	35	17

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TABLE XI

Time of Day of Suicide

Time of Day	Male	Female	Total
6.00 a.m. to 12 noon	69 (36·4%)	59 (43·4%)	128 (39·4%)
12 noon to 6.00 p.m.	23 (12·2%)	29 (21·3%)	52 (16·0%)
6.00 p.m. to 12.00 a.m. ..	34 (18·0%)	13 (9·6%)	47 (14·5%)
12.00 a.m. to 6.00 a.m. ..	41 (21·7%)	20 (14·8%)	61 (18·8%)
Not known	22 (11·6%)	15 (11·0%)	37 (11·4%)
Totals	189	136	325

figure is for the 12 midnight to 6.00 a.m. period. Similarly, examining the figures for the various diagnostic groups, those diagnosed as suffering from depression are most commonly found to commit suicide in the morning period (Table XII).

Suicide Letters

Notes were left by 111 patients (33·8 per cent.). Many of these clearly reflected the thought content of the suicide, showing it to be of a deeply depressive type. For example, there were well-marked guilt feelings, hopelessness and despair and requests for forgiveness for harm done. Many showed considerable thoughtfulness for those left behind and issued warnings about the danger of escaping gas or apologies for disturbance and grief caused.

A number issued detailed instructions about the care of property of the deceased and represented a last will and testament. A small number were frankly abusive or accusatory, but it was not usually possible to ascertain whether the information contained in them represented truth or paranoid delusional ideas.

Assessment of the Suicides

It is difficult enough for the psychiatrist to be sufficiently *en rapport* with the patient to have some idea of what is going on in his mind, even after several psychiatric interviews. It is virtually impossible to assess, from the cold official statements taken from relatives, the state of mind of the suicide prior to his death. Nevertheless, we have taken note of those factors which might reasonably be considered as contributing to the state of unhappiness which will cause an individual to take his own life. In other words, these were factors which we, taking into account the circumstances of the suicide, might consider as sufficient reason to end one's life, presupposing a degree of rational judgment unclouded by psychotic illness.

The first factor we considered important was physical disability. This included not only lethal or terminal illness, but also conditions such as blindness, severe arthritis or stroke, more particularly if they were of recent onset. Sixty-five (20·0 per cent.) patients fell into this category.

An even more difficult judgment to make was

TABLE XII

Time of Death of Differing Diagnostic Groups

	No Psychiatric Illness	Only Physical Illness	Depression	Schizophrenia	Neurosis
6.00 a.m. to 12 noon ..	14	6	95	9	3
12 noon to 6.00 p.m. ..	9	4	36	2	1
6.00 p.m. to 12.00 a.m. ..	8	2	29	3	5
12.00 a.m. to 6.00 a.m. ..	6	6	38	7	6
Not known	11	0	21	3	1

NOTE. Additional physical illness will occur in the psychiatric diagnostic groups.

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the effect of bereavement in precipitating a suicide. The death of a relative was frequently mentioned by other relatives at the inquest and may have referred to an event within months or years, or simply the anniversary of an event long past. We have confined our assessment to deaths occurring within a few months of the suicide. Twenty-one (6·5 per cent.) suicides took place under such circumstances, one actually occurring before the death of the wife who was moribund with carcinoma at the time.

Loneliness was also cited as a cause either by a relative or in the suicide letter. This occurred in 10 (3·1 per cent.) cases, differentiated from bereavement by being due to separation of husband and wife, or desertion of one or other spouse, and also reports of the suicide having lived a miserable, lonely existence for a long period of time without evidence of recent bereavement. Threatened or pending court proceedings were an occasional cause of suicide. Where there was an actual trial pending, the police gave evidence of this, but where the problem was of financial difficulty, it was not always clear whether the facts put forward by the suicide in his note were correct, or whether they represented delusional ideas, as was certainly implied in a number of statements by witnesses. Court proceedings were pending or under way in 17 (5·2 per cent.) cases, although in one case the suicide was due only to be called as a witness and there was no evidence that he was in any way involved in the charges. In four cases the charges were of sexual assault or indecency.

One inevitably approaches a retrospective study of this kind with a number of preconceived ideas. These can nowhere be more apparent than where the psychiatrist comes to assess the probability of psychiatric illness in people now dead, due to self-killing. Our assessments do not have the force of a clinical diagnosis based on an interview with the patient, but are judgments from fragments suggesting one or more features of psychiatric illness in the story put forward in the court by the relatives and sometimes by doctors called to the inquest. Bearing this point in mind, we found that more than three quarters were suffering from some form of psychiatric illness. Thus, in 276 (84·9 per cent.) cases there was evidence of such illness, while in only 49 was the suicide considered to have taken place in a person showing no evidence of psychiatric abnormality.

In many cases it was relatively easy to arrive at a diagnosis of psychiatric illness. Either the patient had been seen recently by a general practitioner or a psychiatrist, or the material of a suicide note clearly indicated the presence of delusional ideas as, for example, the belief held by the patient that he was in a state of financial ruin when, in fact, his business was successful. Less definite evidence appeared in the form of statements that the patient believed that he was a burden or useless to everyone, but this might be coloured by the presence of some serious physical illness. Longstanding physical complaints, for which investigation had been carried out and no organic cause found, were considered likely evidence of hypochondriacal delusions, or somatic symptoms of a depressive illness. Previous psychiatric treatment and previous suicidal attempts were also considered to be supportive evidence for a diagnosis of psychiatric illness.

On the other hand, suicides taking place for no apparent reason, without previous warning, and with no report of depression, anxiety, or other neurotic symptoms, and also those suicides directly related to some impending catastrophic situation, for example, procedure for sexual assault, were considered to be non-psychiatric. Sixty-six (23·1 per cent.) cases of suicide were thought to be reactive to reasonable stress, although some of these did show definite psychiatric symptoms. The stresses included the knowledge of severe disabling or lethal physical illness, and the impending catastrophes as already described. This essentially subjective classification may well leave much to be desired but was the only one available to us.

Coroners' Verdicts

In criminal trials the accused is always given the benefit of the doubt. In a coroners' court a similar principle applies, but here there is no accused, only the search for truth. Nevertheless, for both legal and religious reasons, there was undoubtedly a slur on the suicide in the past. For the most part the penalties associated with

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the suicide have now passed, although many insurance policies still retain a clause withholding payment in the event of "deliberate suicide". Coroners are no more immune from social and cultural pressure than other members of the community, and it is natural that they should continue to bring in a verdict which will afford the least amount of grief to the relatives as is in keeping with the evidence that is offered before them.

As a result, in many cases, although there may well be evidence of mental illness and even of suicidal ideas or thoughts, unless that evidence is sufficiently strong, a verdict of suicide will not be brought. We had the opportunity of examining the records of all inquests heard during 1959, there being 222 in all. A verdict of suicide was brought in 46 cases. From our examination we found that in a further 27, there was some evidence either of psychiatric illness or of suicidal intent, but insufficient for the coroner to bring in a verdict of suicide.

This information was collected, not in any way to criticize the verdicts of the coroner, but rather to point out two facts. Firstly, that there may be half as many again possible suicides amongst the deaths reported as due to accident, misadventure, or with open verdicts. Secondly, in this particular example at least, about a third of the deaths examined by the coroner were possibly due to suicide, this verdict being reached in a quarter of the cases.

Discussion

The reliability of some of the information obtained in a survey of this type must always be questionable. There are so many ways in which the original data may be distorted or misinterpreted. The conclusions which are drawn will depend on the educational and cultural background of the sympathies of the persons who reach the conclusions. In general, the distortions will result in the lowering of the true numbers of suicides, since it is only where the evidence is clear-cut that a verdict of suicide is likely to be brought in. On the other hand, where once a verdict of suicide is reached, every effort will be made to excuse the behaviour on the grounds that the balance of the mind was disturbed.

In this type of survey there is no means of recognizing these fallacies, because it is unlikely that the information will be available on which an independent judgment can be made. One has to accept the verdict as recorded and to expect that any bias that is introduced is likely to be one which is reasonably uniform in this country and therefore likely to apply in Coroners' Courts in other areas which have been surveyed.

On this assumption it is possible to look at the figures found in this survey of suicides in the Bristol clinical area, to examine them in relation to the population of the district as a whole, and to compare them with other populations previously surveyed.

The Bristol suicide rate is a low one, 8·2 per 100,000 of the population. It is similar to that of Sheffield, where Stengel and Cook (1961) found 8·4, and lower than most other cities—for example, 12·0 in Leeds, 29·1 in Burnley, 15·6 in Oldham (Jennings and Lunn, 1962) and 19·3 in London. This low rate is of particular significance because it has been noted that there is a positive correlation between the size of an urban population and its suicide rate (Durkheim, 1897).

Table XIII shows figures available for these different areas of England and Wales, for the overall suicide rate, the suicide rate in the elderly, and percentage of physical illness. It will be seen that Bristol corresponds closely with the findings for Sheffield and is, in fact, a city of comparable size. However, mere size of population is not the main determining factor in the suicide rate, and other variables may play a more important part. These are likely to be related to the degree of industrialization, the type of work available, the degree of expansion or retraction of industry, both locally and in the area as a whole, and the proportion of the various age groups which continue to live there as a result of these factors. It is probable that consideration of the larger conurbations such as London or Birmingham must inevitably be misleading because they are composed of several towns, some of which retain their original character as communities, while others lose their composite structure and become rooming house and transit areas with a high

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TABLE XIII

Suicide Statistics for Urban Population in England

	London (Sainsbury, 1955)	Leeds (Stengel and Cook, 1961)	Sheffield (Stengel and Cook, 1961)	Burnley (Stengel and Cook, 1961)	Oldham (Jennings and Lunn, 1962)	Bristol	England and Wales
Rate per 100,000 ..	19·3 (aged 14 & over)	12·0	8·4	29·1	15·6	8·2	11·5
% female suicides ..	34·9	37	36·3	43	39·9	41·8	37
Suicides in old age group	43·5 (over 55)	26·5	34·8	43·3	45·4	38·8	38·7
		(.....over 65.....)			(.....over 60.....)		

proportion of social isolates living in single rooms.

In order to explain this relatively low suicide rate in a large urban community one must expect to find a cohesive population with a small proportion of social isolates, whether due to widowhood, the unmarried state or to single persons arriving to take advantage of a high employment rate, and also a low number of elderly in the community. The percentage of the population over 60 in Bristol is 15·9 comparable to the 15·6 of Leeds and the 15·2 of Sheffield. There are reasonably good employment prospects in the district but probably not more than are filled by the surrounding rural population and small urban community. Hare (1956) has already commented that Bristol did not suffer severely from the industrial depression and has no necrotic centre such as has been described in Chicago. Its industries are varied and well balanced and Bristol has been called "the pattern of a diversely occupied town", and there seemed to have been relatively little migration in or out of the city during the 10 years preceding his paper. This stability of population was also noted in a follow-up study carried out in the city some years later (Seager, 1958).

Thus a comparison between the suicide statistics of Bristol and other communities in England shows certain differences, but these can be explained by an examination of the population of the city and its surrounding areas as compared with others under consideration. This may be taken as evidence that the study as a whole gives a reliable picture of the situation concerning suicides in this area and makes it reasonable to draw other conclusions from these figures.

In at least three quarters of the cases, it is considered that the suicide was related to an episode of mental illness of either short or long duration. It appears, however, that there are two distinct times at which suicide may occur and in this respect two different syndromes may be recognized. One group, the smaller, of 38 men and 64 women, had suffered from psychiatric illness on at least one previous occasion and the tendency was for a fairly prolonged period of illness, usually described as "suffering from nerves for many years". Many of these patients were well known to their general practitioners and to psychiatrists and had made previous suicidal attempts. Successful suicide was the culmination of a long period of psychiatric illness. In our present state of knowledge such suicides must perhaps be looked upon as the inevitable mortality rate of these conditions and while every effort must be made to reduce this figure it is probable that nothing can be done without an increase in our knowledge of their aetiology and of further advances in methods of treatment.

The other, and much more numerous group, of 151 men and 72 women presents the more serious problem, and in these cases there was usually no long history of psychiatric illness. In some there was a recent, precipitating stressful situation such as a bereavement, an impending court case, or bankruptcy. Severe or potentially lethal physical illness also acted as a precipitant but many individuals had no such understandable reason for taking their lives and it is probable that the remainder were suffering from an acute and recent psychiatric illness which might well have been amenable to treatment.

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In many cases their complaints were not taken seriously or were not recognized for what they were. A complaint of financial ruin was brushed aside as imagination rather than evidence of delusional thinking; a belief of incurable venereal disease was looked upon as the misunderstanding of a simple medical symptom, rather than a severe hypochondriacal delusion. Many of these patients had sought medical advice, and it must be noted regrettably that they had not received the treatment which might well have helped them and saved their lives. Even where action was about to be taken, it was not always taken in time and it has already been pointed out that 12 potential patients committed suicide just before their psychiatric appointment. Carstairs (1962) has suggested that when an appointment is to be made the fear of insanity must be discussed with the patient. It is probably wiser that if there is any question of suicide, urgent admission should be arranged rather than subjecting the patient to the formalities of an out-patient clinic. This highlights the need for adequate domiciliary services and psychiatric emergency wards to allow rapid admission for any cases thought suitable. It is unlikely that a service such as the "Samaritans" will be able to deal with this type of problem where the need is for urgent psychiatric treatment rather than counselling and support.

The warning signs of impending suicide are probably available for anyone to see who cares to look. Robins *et al.* (1959) pointed out that 69 per cent. of suicide victims communicated their suicidal threats before the act. Motto and Greene (1958) stated that 48 per cent. of patients had had medical contact within 6 months of the suicide. In our series 41 per cent. had received medical attention during the 4 weeks prior to death although a quarter of these were reported as having serious physical illness which would have accounted for their medical contacts. Nearly a quarter of the patients had given a clear indication that they intended to take their own lives.

Unfortunately, in the group of patients who had already suffered from psychiatric illness for some length of time, there would be the problem of deciding whether the patient was "crying wolf". Also, there is the widely held belief that "those who talk about it, don't do it". No completely accurate advice can be given on recognizing the dangerously suicidal patients, but undoubtedly a patient hitherto of sound personality who becomes miserable and complains of unreasonable fears or strange ideas and in association with these says that life is not worthwhile, or who says directly that he intends to kill himself, must be taken seriously and be referred immediately for psychiatric treatment. At the other end of the scale, the young woman who has frequent emotional outbursts during which a threat and even a practical gesture of suicide is common, may well be in no danger from the point of view of an immediate threat to her life, although there may still be indications for psychiatric referral and treatment.

The death of a person by suicide is often death which was preventable if treatment had been initiated in time. The mortality rate of many diseases has fallen over the years with increasing knowledge of the condition and its early recognition. It is certain that the mortality rate due to suicide can similarly be reduced if the underlying condition is recognized; this can only be done when physicians receive sufficient training in psychiatry to be able, at least, to recognize that a patient is in need of specialist treatment and to refer him in time.

Summary

Coroners' inquisitions on 325 suicides committed during the period 1957–61 were examined.

Of these, 20 per cent. showed evidence of physical ill health and in 50 cases this contributed towards the suicide.

There was a previous history of psychiatric illness in one-third of cases and 16 per cent. had already made suicidal attempts. In over two-thirds of the suicides there was evidence of some form of mental illness.

Two different syndromes were found; in one, suicide followed a long period of psychiatric disability, and in the other represented an early symptom of psychiatric illness, often undiagnosed.

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C. P. Seager, B.Sc., M.D., D.P.M., *Senior Lecturer in Psychiatry, University of Sheffield*

Anthony Flood, M.C., M.B., Ch.B., D.P.M., *Senior Hospital Medical Officer, The Day Hospital, Bristol*

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