possible on an exchange basis, where the accent is on work rather than an examination. At the end of three or four years of such work in a developed country, part of which could be spent in a specialized unit, the doctor would return home a true specialist, rather than one who has specialized in the art of passing an examination. On his return the specialist could be sent to the larger hospitals, where he could join in the postgraduate training programme and undertake the training of others.

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Hospital Topics

Excessive Use of Psychiatric Services by Suicidal Patients

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Summary

The use of psychiatric services by patients with a suicidal history was examined to see if they placed a greater long-term burden on these services than other types of patient. Suicidal patients spent significantly more days in hospital and made more outpatient attendances; suicide attemptors in particular not only needed more emergency consultations but also spent more days in hospital. A more economical yet more effective treatment policy for the suicidal patient is needed.

Introduction

The increasing numbers of admissions due to self-poisoning or self-injury ("attempted suicide") represent a considerable work load for general hospitals.¹⁻⁴ Less attention has been paid, however, to their effect on the psychiatric services; these are required to provide screening for all such admissions⁵ and two-thirds of the patients are subsequently referred for psychiatric treatment.⁶⁻⁹ A survey of an American state psychiatric hospital¹⁰ showed that 6.5% of patients had attempted suicide shortly before admission and Woodruff *et al.*¹¹ noted a history of attempted suicide in 14.2% of a psychiatric clinic sample. A more recent survey in Oxford¹² showed that one in every 11 inpatients or day-patients had attempted suicide over a six-

month period—a rate of 8800 per 100 000 patient population. General population surveys, on the other hand, show a much lower rate of attempted suicide—364-600 per 100 000 per year.^{13 14}

Though many would consider most suicide attempts to represent an appeal for help^{15 16} or care¹⁷ it has not been conclusively established whether those who do attempt suicide actually seek or require more psychiatric "help" than those who do not. Evidence from follow-up studies confined to relatively short periods after a suicide attempt¹⁸⁻²⁰ shows that about 27-64% of attemptors fail to make further contact with a psychiatrist. On the other hand, psychiatric patients with a history of attempted suicide have had more previous psychiatric illnesses²¹ or hospital admissions¹¹ than those without.

By using patient contacts obtained through a cumulative psychiatric case register we attempted to test more directly whether suicidal history was associated with a greater burden on psychiatric services. We confined the study to patient contacts over a defined period, considered only those service contacts which were systematically recorded, appraised comprehensively the use of services by including not only inpatient care but also outpatient and emergency contacts, and examined groups which were comparable on several important variables.

Method

The original sample, from which our sample was derived, comprised 6795 referrals from 1963 to 1967 aged 20 or over obtained from the north east of Scotland psychiatric case register.²² A subsample of 575 patients, for whom additional psychological test data were available, had been extracted to examine the personality characteristics of suicidal patients.²³ This smaller sample was comparable to the original one in age, sex, and social class. While reviewing the case records of this subsample for evidence of suicidal acts or communications certain clinical items were also noted, which formed the material for our study. This investigation resulted from the fortuitous observation that the suicide attemptors seemed to have the bulkiest case records. This additional information was collected in 1974, thus providing the opportunity to include data from a further period ranging from seven to 11 years.

Evidence of suicidal acts or suicidal communications recorded at any

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point during the patient's contact with a psychiatric service was used to allocate each patient to one of the following groups: (a) the suicide attempt group comprised 136 patients who on one or more occasions had carried out deliberate but non-fatal acts of self-poisoning or self-injury; (b) the suicidal ideation group comprised 147 patients who had expressed or admitted to suicidal ideas without ever making a suicide attempt; and (c) the non-suicidal group comprised 233 patients with no record of suicide attempt or communication. Fourteen patients who were definitely known to have committed suicide or could conceivably have done so were excluded. Eight patients could not be classified because of inadequate or conflicting information, and the case notes of the remaining 37 could not be located within the study period. The attempted suicides corresponded with other published samples in methods and precipitating factors.²⁴ In so far as a suicidal ideation group is distinguishable in respect of certain features of personality^{25 26} patients of this type may constitute a distinct clinical entity; therefore we considered them separately.

The following indices of the use of psychiatric services were adopted: for emergency consultations we counted the total number of psychiatric consultations in casualty departments or in the wards of general hospitals together with the total number of domiciliary visits; for outpatient attendances the total number of psychiatric outpatient clinic attendances; and for hospital days the total number of days spent in a psychiatric hospital, including those spent in a day-hospital.

We examined the relation between suicidal history and use of services by comparing the three clinical groups in terms of the defined three categories of service contact. The three groups were comparable in decade of birth, sex, and social class distribution.²³ We took the further precaution of comparing these three groups in respect of the marital status and psychiatric diagnosis recorded during the last psychiatric contact.

Results

Table I shows that disproportionately more suicide attempters were divorced, separated, or living apart and fewer were married or cohabiting. The marital status distribution of the other two groups was comparable. The suicide attempt and suicidal ideation groups both contained relatively more neurotic depressives and alcoholics and relatively fewer non-depressive neurotics (table II). For the suicide attempt group only (for little has been reported on suicidal ideation) the findings in both these tables accorded with those of other workers.²⁴

Patients with the most emergency consultations tended to be divorced, separated, or widowed or to have a diagnosis of alcoholism or personality disorders; those who were married or cohabiting and had non-depressive neuroses had fewer emergency consultations. A large number of hospital days was associated with being single, divorced, or separated and the diagnosis of alcoholism, personality disorder, and non-depressive psychosis. A small number of hospital days was associated with being married and having a depressive or non-depressive neurosis. Because of these associations the three groups were equalized by randomly extracting cases to create an equivalent distribution by both marital status and diagnosis before examining the question of whether a relation existed between suicidal history and increased service demand.

Table III presents the overall use of psychiatric services from the time of the key referral, in 1963-7, to 1973. Relatively more suicide attempters, compared with the other two groups, had required two or more emergency consultations, most probably because of the need for psychiatric assessment of patients treated in a general hospital after an attempt. There were more non-suicidal patients with less than five outpatient attendances. The numbers with five to 14 attendances were

similar in the three groups. From 15 attendances onwards, however, the suicide attempt and suicidal ideation groups greatly outnumbered the non-suicidal group.

The most important feature was the striking difference between the three groups in the overall time spent in a psychiatric hospital. Most non-suicidal patients (72%) had spent less than 90 days in hospital, whereas 54% and 42% of the suicidal ideation group and the suicide attempt group respectively had done so. On the other hand, over 40% of the attempted suicide patients had spent 180 days or more in hospital; this compares with only 21% of the suicidal ideation group and 14% of the non-suicidal group.

It may be argued that in these intergroup comparisons we took no account of the possible variability in the time span between the date of the key referral and the study date. A reanalysis of the data using measures of service use per year after the key referral date, however, produced remarkably similar findings.

Discussion

Before drawing conclusions from our findings certain limitations of the study sample and follow-up should be considered. Since 99% of the sample had a history of psychiatric hospitalization there may have been a bias towards the more serious cases. Because consideration of service use was made on the basis of contacts within but not outside the north east of Scotland the

TABLE I—Marital Status Composition of Suicide Attempt (S.A.), Suicidal Ideation (S.I.), and Non-suicidal (N.S.) Groups. Results are Numbers (%) of Patients

Marital Status	Suicide Attempt	Suicidal Ideation	Non-suicidal	Total
Single	20 (14.7)	23 (15.6)	53 (22.7)	96 (18.6)
Married or cohabiting	77 (56.6)	108 (73.5)	163 (70.0)	348 (67.4)
Divorced, separated, or living apart	26 (19.1)	7 (4.8)	7 (3.0)	40 (7.8)
Widowed	13 (9.6)	9 (6.1)	10 (4.3)	32 (6.2)
Total	136 (100.0)	147 (100.0)	233 (100.0)	516 (100.0)

Significance of differences: S.A. v. S.I., $\chi^2 = 16.67$; D.F. = 3; $P = <0.001$. S.A. v. N.S., $\chi^2 = 33.91$; D.F. = 3; $P < 0.001$. S.I. v. N.S., $\chi^2 = 3.79$; D.F. = 3; not significant.

TABLE II—Major Diagnostic Categories of Suicide Attempt, Suicidal Ideation, and Non-suicidal Groups. Results are Numbers (%) of Patients

Primary Diagnosis	Suicide Attempt	Suicidal Ideation	Non-suicidal	Total
Depression:				
Neurotic or reactive	24 (17.6)	23 (15.6)	18 (7.7)	65 (12.6)
Unspecified, endogenous, etc.	61 (44.9)	74 (50.3)	102 (43.8)	237 (45.9)
Neurosis (other than depressive)	10 (7.4)	18 (12.2)	48 (20.6)	76 (14.7)
Psychosis (other than depressive)	7 (5.1)	10 (6.8)	20 (8.6)	37 (7.2)
Alcoholism (including drug addiction)	18 (13.2)	16 (10.9)	12 (5.2)	46 (8.9)
Personality disorder	11 (8.1)	3 (2.0)	24 (10.3)	38 (7.4)
Other	5 (3.7)	3 (2.0)	9 (3.9)	17 (3.3)
Total	136 (100.0)	147 (100.0)	233 (100.0)	516 (100.0)

Significance of differences: S.A. v. S.I., $\chi^2 = 8.86$; D.F. = 6; not significant. S.A. v. N.S., $\chi^2 = 25.78$; D.F. = 6; $P < 0.001$. S.I. v. N.S., $\chi^2 = 23.69$; D.F. = 6; $P < 0.001$.

TABLE III—Use of Psychiatric Services by Suicide Attempt, Suicidal Ideation, and Non-suicidal Groups. Results are Numbers (%) of Patients

	No. of Emergency Consultations				No. of Outpatient Attendances				No. of Hospital Days			
	0	1	2	>2	<5	-14	-24	>24	<30	-89	-179	>179
Suicide attempt (n = 100)	23 (23)	39 (39)	20 (20)	18 (18)	38 (38)	23 (23)	15 (15)	24 (24)	19 (19)	23 (23)	17 (17)	41 (41)
Suicide ideation (n = 125)	74 (59.2)	32 (25.6)	12 (9.6)	7 (5.6)	48 (38.4)	34 (27.2)	26 (20.8)	17 (13.6)	27 (21.6)	40 (32.0)	32 (25.6)	26 (20.8)
Non-suicidal (n = 193)	126 (65.3)	51 (26.4)	10 (5.2)	6 (3.1)	104 (53.9)	56 (29.0)	17 (8.8)	16 (8.3)	53 (27.5)	86 (44.6)	28 (14.5)	26 (13.5)
Total (n = 418)	223 (53.3)	122 (29.2)	42 (10.0)	31 (7.4)	190 (45.5)	113 (27.0)	58 (13.9)	57 (13.6)	99 (23.7)	149 (35.7)	77 (18.4)	93 (22.2)
2 x 4 χ^2 comparison*:												
S.A. v. S.I.	31.96; $P < 0.001$				4.71; not significant				11.29; $P < 0.05$			
S.A. v. N.S.	58.51; $P < 0.001$				18.53; $P < 0.001$				32.24; $P < 0.001$			
S.I. v. N.S.	3.76; not significant				14.02; $P < 0.01$				11.49; $P < 0.01$			

*D.F. = 3.

service use may have been underestimated; it is unlikely, however, that this would apply more to one group than another. Though it has been officially recommended^{5 27} that all people admitted to general hospitals after a suicide attempt be assessed by a psychiatrist as many as 22% of patients leave hospital before assessment can be made.²⁸ Because the university department of psychiatry in Aberdeen has a 24-hour duty roster to cover general hospital referrals probably few cases were lost from this cause. Nevertheless, valid inferences for populations of psychiatric referrals can be drawn from these findings, particularly since the excessive demands of the suicidal patients we studied could not be accounted for by age, sex, marital status, social class, or psychiatric diagnosis.

Studies based on suicide attemptors referred to general hospitals have been confined to their short-term demand on general medical resources, but there are some indications of the long-term service needs of such patients. By comparing 91 suicide attemptors admitted to the Edinburgh Royal Infirmary with 91 psychiatric outpatients who had never attempted suicide Bruhn²¹ noted that the former group contained significantly more patients who had previously received psychiatric treatment. Similarly, among 500 patients from the Washington University Psychiatric Clinic¹¹ the suicidal patients had spent significantly more time in psychiatric hospitals. Since, however, neither of these studies attempted to test systematically over a specific period of time the overall use of psychiatric services, taking length of treatment into consideration, only limited conclusions can be drawn from them.

A more direct association between suicidal behaviour and use of services was shown recently in a study of 91 psychiatric hospital patients.²⁹ A rating of "suicidality," based on the degree of seriousness of expressed or assigned suicidal potential, was examined in relation to certain clinical variables, including length of psychiatric hospitalization, which was shown to be one of the best predictors of suicidality. Leonard's suicidality rating was based on the assumption that suicidal potential can be represented on a continuum, ranging from suicidal thoughts or verbalizations to suicide attempts of increasing lethality and culminating in suicide. In our study the emphasis was on inter-group comparisons and there was not necessarily the same implication of continuity. Nevertheless, the two studies both show an association between suicidal behaviour and numerous stays in hospital.

Our findings seem to show conclusively that suicidal patients, and suicide attemptors in particular, impose greater demands on the psychiatric services. We cannot provide an explanation for this, but several possibilities present themselves. The explanation may lie in the type of illness from which the patients tend to suffer or their underlying personality or possibly both. Those patients who are liable to attempt suicide may suffer from a more severe form of mental illness, one which runs a more relapsing course, or one which is more resistant to treatment. Though our three groups were equalized for diagnosis, no account could be taken of those three clinical features. Alternatively, the attempted suicide group may contain a high proportion of the more immature and less robust members of society who in times of stress find it necessary to evoke others' help. Once admitted to psychiatric hospital such individuals may be reluctant to relinquish the comparative security they find there and be tempted to seek readmission during subsequent crises. The evidence of previous studies does in fact indicate a high proportion of personality disorders among those who attempt suicide.

The explanation for this result may, however, lie partly within the psychiatric services themselves. Since the tendency to attempt suicide may be enhanced by increased proximity to suicidal individuals^{30 31} admission to psychiatric hospital, by bringing the individual into contact with a high-risk group, may itself contribute to a suicidal disposition. Thus, the suicidal behaviour could be, for some patients, secondary to hospitalization.

Psychiatrists are understandably affected by the knowledge that a patient has either communicated suicidal intent or already

made an attempt. In such cases they may be inclined to exercise caution by maintaining outpatient contact or by arranging admission to a psychiatric hospital and delaying discharge. Such a policy carries the risk of conveying too readily to patients that crises may be temporarily "resolved" by a suicidal act which may lead to admission. A sequence of this kind might well lead to excessive dependence on the psychiatrist or the institution. To prevent the creation of such a chronically suicidal character Schwartz *et al.*³² recommended a gradual lessening of caring responses and surveillance once the initial crisis has been dealt with, in the long-term interest of the patient. Bostock and Williams³³ similarly proposed that some classes of suicidal behaviour are unwittingly maintained by reinforcement both from environmental contingencies and the psychiatrists themselves and have consequently recommended management according to behavioural principles.

Further research should be directed to understanding the nature of the relation between suicidal history and increased use of psychiatric services. Our results suggest, for instance, that not all suicide attemptors make excessive demands on the services and it is desirable to identify the characteristics of those who do. It may also be desirable to focus on the responses of the psychiatric services to suicidal individuals to establish more effective and economical treatment policies.

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