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ABSTRACT

Suicide assessment and prediction are important functions performed by psychiatrists. Although the specificity and sensitivity of assessment instruments are poor, trainees are instructed to become proficient in their application. The occurrence of suicides during training confronts trainees with personal and professional limitations. The charts of patients who committed suicide while on the rolls of a large university-affiliated private psychiatric hospital, or within one month of discharge, were reviewed for relevant clinical characteristics and to assess the parameters related to training. Suicided patients were matched by age, sex, and unit of the hospital with a control selected from those admitted one or more months before the index patient. Over an 8.5 year period, 20 men and 15 women committed suicide, the mean age was 32.7 years and the vast majority were white, single, and of low socioeconomic status. There were no significant differences between suicides and controls on race, religion, marital status, or socioeconomic status; number of prior hospitalizations; prior discharges; or length of stay for index hospitalization. There were significant differences in suicidal tendency ratings, presence and number of suicide attempts, history of suicidal ideation and treatment with antidepressant medications, and recent feelings of hopelessness. There were trends for suicided patients to have an Axis I diagnosis of Affective Disorder only and to have had more than one therapist during their index treatment episode. (Author/NB)

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THE PREDICTION OF SUICIDE: DILEMMAS FOR TRAINING

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ABSTRACT

Suicide assessment and prediction are important professional functions performed by psychiatrists. However, the specificity and sensitivity of our instruments are poor. Nevertheless, trainees are instructed to become proficient in their application. The occurrence of suicides during training confronts the trainees with their own personal and professional limitations. The charts of patients who committed suicide while on the rolls of a large university affiliated private psychiatric hospital, or within one month of discharge, were reviewed for relevant clinical characteristics as well as to assess the parameters related to training. Suicided patients were matched by age, sex and unit of the hospital with a control selected from those admitted one or more months before the index patient.

Over an 8 and 1/2 year period, 35 patients committed suicide; 20 men and 15 women. The mean age was 32.7 years; the vast majority were white, single, and of low socioeconomic status. There were no significant differences between suicides and controls on: race; religion; marital status; socioeconomic status. There was a trend for suicides to have an Axis I diagnosis of Affective Disorder only. There were no significant differences in: number of prior hospitalizations; prior AMA discharges; lengths of stay for index hospitalization. There

were significant differences in: SADS Suicidal Tendency ratings; presence of suicide attempts; number of suicide attempts; history of suicidal ideation; history of treatment with antidepressant medications; feelings of hopelessness in the last two weeks of treatment. There was a trend for suicided patients to have had more than one therapist during their index treatment episode.

Trainees are confronted with a dilemma: they are expected to learn how to predict what they cannot accurately predict. Additionally, the experience of a suicide is both personal and powerful, especially when it occurs early in someone's career. Suicides are not rare at training centers, and affect many trainees. The process of rotating trainees to various services - structured into their training - disrupts continuity of care and may contribute to suicide. Candor of senior faculty regarding suicides they have experienced is recommended in assisting trainees, by serving as emotional supports and role models.

INTRODUCTION

After what felt like a rash of suicides at our facility, and in the context of what seemed to be a growing number of adolescent suicides in our area, we became interested in the pattern of suicides at our facility. Since our facility is the training site for psychiatric residents, psychology interns and social work students, as well as other health professionals, we were particularly concerned about the effect these suicides had on the training experience, as well as the question of whether or not there were some predictors that might be of specific value for work at our institution.

We were interested in the number of therapists who were directly involved with the suicides. Our belief was that although suicides are uncommon, the nature of training is such that many patients have more than one therapist during a treatment episode.

Since most lists of predictors of suicide are weighted toward trait variables (1-4) - demographic characteristics, diagnosis, prior acts of suicide - and have little utility for short-term prediction, we chose to study some clinical variables, such as the affective state in the two weeks before suicide, to see if we could glean evidence of state differences from the other patients we cared for (5). A preliminary version of this work reporting on the first 23 suicides, was presented at the APA in 1984.

METHOD

All patients who committed suicide while on the hospital rolls - inpatient, outpatient, adult or child day hospitals - or within 30 days of discharge from any of the inpatient or day hospital programs, from January 1, 1979 through June 30, 1987, were included. We included suicides up to 30 days after discharge since we felt fairly confident that we would learn of them, that 30 days would fall into the category of short-term prediction and that data recorded in their charts would be relevant to such risk assessment.

The suicides were matched by age, sex and unit of the hospital with a control patient admitted one or more months before the index patient. We hoped that by matching on age and sex we would remove variation confounded by these parameters. We matched by unit to avoid skewing of data that might occur through the existence of specialty units in the hospital as well as to eventually tease out milieu effects. By choosing a control patient admitted before the suicided patient, we hoped to avoid contamination effects of the suicide changing treatment and assessment styles.

A special data summary form was completed from review of the chart of each patient - suicides and controls. Attempts were made to use previously published scales and variables to facilitate

comparisons with other studies. Length of stay was recorded for patients who suicided during their hospitalization and for those who suicided within thirty days of discharge.

Additionally, one of the authors (LMR) was a member of the Special Review Committee of the hospital where all suicides were routinely reviewed. The therapists of all the suicides were interviewed either in the context of the Special Review meeting or informally. All sources of data were used to compile the best data possible. Data were analyzed using chi square analysis for frequency data and Students t tests for continuous data with the assumption of inhomogeneity of variances.

RESULTS

Over the 8 and 1/2 year period, 20 men and 15 women committed suicide. For demographic characteristics, see Table I. The control group was well matched by age. There were no significant differences between the suicides and controls on: race; marital status; religion; socioeconomic status.

Some of the clinical characteristics of the two groups are listed in Table 2. Diagnostically, if one compared those with pure affective diagnoses (uncomplicated by substance abuse and not considered schizoaffective) to those with other diagnoses, one found a trend for an excess of affectives in the suicides

(chi square = 3.43, df = 1, N = 70, 0.05 < p < 0.10). There were no differences in Axis II diagnoses. Both groups had substantial histories of prior hospitalizations, and few documented AMA discharges. The length of stay did not differ significantly, even though some of the suicides' lengths of stay were truncated by their deaths; the direction of the difference is for the control patients to stay longer.

There were no significant differences between suicides and controls on: history of depression; family history of depression; family history of suicide; history of alcoholism; family history of alcoholism; legal status on admission to the hospital; whether the patient was ever on involuntary status during their index admission; separation experiences prior to age 15; physical health; occupational history.

Suicidal ideation was present significantly more often in those who subsequently committed suicide (chi square = 7.48, df = 1, N = 68, p < 0.01). Suicides were significantly more likely to have made a suicide attempt, and to have made more attempts, than controls (chi square = 6.92, df = 1, p < 0.01; t = 3.77, df = 34,34, p < 0.001). Using information available to the clinicians only at the time of admission to their service, ratings on the SADS Suicidal Tendency scale indicated a highly significant difference (t = 4.29, df = 34,33, p < 0.001). Suicides were more

likely to have been treated in the past with antidepressant medication (chi square = 4.63, df = 1, $p < 0.05$). There was no difference in the usage of ECT. Comparing chart notes from the two weeks before a patient killed himself with a two week period comparable in time from the control patient (if that patient were hospitalized through that time period), or selected from the middle two weeks of the control patients' stay, revealed no differences in observations regarding depressive affect, somatization or hostility but did reveal a significant difference on presence of hopelessness (chi square = 5.43, df = 1, N = 69, $p < 0.02$). Suicided patients showed a trend to be more likely to have had more than one therapist during their hospital treatment (chi square = 3.83, df = 1, N = 68, $0.05 < p < 0.10$). The suicided patients were cared for by 50 therapists during their index treatment episode; during the 8 and 1/2 years there was a pool of 144 trainee-therapists.

Using the Occupational Scale of the Hollingshead Two Factor Index of Socioeconomic Status, there was a highly significant difference between the status of the suicides and their fathers ($t = 2.93$, df = 34,26, $p < 0.01$), indicating a drop in status for the patients; this was also true for the controls ($t = 3.09$, df = 34,27, $p < 0.01$).

DISCUSSION

Standard texts indicate that depressive illness and alcoholism are common diagnoses in suicided patients (3,6). It is of interest that our data confirms this only partially. We did not find an excess of alcoholism in our suicided patients, but did find a trend for an excess of depressives. We found that a significant number of the suicides had been treated with antidepressant medications sometime during their lifetime. Two possibilities occur to explain why we did not find a clear and statistically significant excess of diagnosed depressives: that the growing incidence of depression in the population is masking the finding in a sample as small as ours; that the hospital attracts a disproportionately large number of depressed patients so that differences are lost, but would be more easily found in less biased samples. Since a trend was found for the purely affectively ill versus all other diagnoses it is possible that as the sample size increases, this finding will emerge as statistically significant. A third possibility is that the suicide patients evoke a countertransference reaction that results in the therapists minimizing the depressive components in these patients and hence, underdiagnose depression. Interviews with the therapists were not able to elaborate this point since the acute and strong emotional responses of the therapists clouded such assessments.

The lack of an association with alcoholism is more difficult to explain. The hospital has inpatient and outpatient alcohol treatment programs, which account for about one fifth of all hospital admissions. Only one of the inpatient suicides was contributed by the inpatient alcohol treatment unit. Three explanations would be: that alcoholic patients at high risk are screened out by the service, thus biasing their population towards a lower risk group; that the incidence of alcohol abuse is so great in both the suicides and controls that the sample size is too small to detect a difference; and finally, that the treatment program is sufficiently effective to reduce the risk during the time period studied.

The lack of a finding regarding physical illness and suicide is probably a result of a bias in patient selection: the hospital functions as a free-standing private psychiatric hospital and does not receive patients with acute medical illnesses.

The findings of the presence of suicidal ideation, more likely and more frequent attempts, and higher SADS score (somewhat redundant with the others since suicidal ideation and acts are elements of the scale) confirm that patients who threaten suicide or engage in "gestures" are at increased risk. Paradoxically, the unit in the hospital which specializes in the treatment of borderline patients - a criterion of which is suicidal behaviors,

contributed no suicides to the study. On the other hand, the unit which studied depression, often in personality disordered young adults, did contribute some subjects. These findings are confounded by the fact that the borderline unit treated far fewer patients. Nevertheless, it raises the question of whether the patients at highest risk for suicide are those with borderline personality disorder and affective illness. Our sample size is too small to test this hypothesis.

It is of particular interest that the suicides were noted to be significantly more hopeless in their last two weeks of clinical contact. This finding is consistent with Beck's work on hopelessness and suicide, as well as Pokorny's suggestion of the suicidal crisis (4,5). However, we did not collect longitudinal data on hopelessness in the patients, so we do not know if this represents chronic hopelessness or acute hopelessness.

The lack of difference in socioeconomic status between the suicides and the controls, and the significant difference between patients and their fathers', suggests a downward drift among all the patients. Since many of our patients were young, it raises questions about whether their inability to meet standards implicitly or explicitly set by their families contributed to their demise. However, why this factor would be no stronger among the suicides than the controls is not explained.

The 35 suicided patients were directly cared for by 50 therapists during their index treatment episodes; only 17 of the suicided patients were cared for by a single therapist during their index stay. The trainees are grouped during the inpatient year on four units, each with 3 PGY-II residents and one psychology intern. Thus, for inpatient suicides, there are typically more therapists with some direct experience of the patient than our records indicate. Minimally one third of trainees would have the experience of knowing a patient who suicided. Training pressures require movement of residents from one service to another to meet training needs. Thus, discontinuity of care tends to be built into the training system. We did not find any indication that the suicided patients had been especially sensitized to losses through early separation experiences, thus making them more vulnerable to such shifts. Nevertheless, models of training which emphasize continuity of care and reduce the inevitable disruptions in treatment that occur when a therapist moves from one service to another, might be explored for their efforts on suicide rates.

Therapists - whether trainees or full trained - uniformly reacted to the suicides of their patients with disbelief, shame, guilt and anger. The power of these reactions made it impossible to discern patterns of special relevance to the assessment of the patients. Depending upon which state the therapist was in, the therapist would deny, blame or doubt. When suicides occurred early in a trainees experience, the effects could be seen not only

in the trainee, but in the cohort of trainees too. Trainees are quickly taught how they are expected to identify and assess suicidal risk, and are empowered to act accordingly. They are instructed in their legal and professional privileges and obligations. Additionally, as beginning psychotherapists, they are taught to understand much of what occurs with a patient as manifestations of transference-countertransference forces. Thus, many forces conspire to make the suicide of a patient a particularly painful experience for the trainee. Since rarely do experienced therapists report to their colleagues and students the suicide of their patients, the sense of isolation felt by the trainees and newly trained professional is exquisite.

Hence, the dilemma for training. Trainees are instructed to assess and predict suicidal behaviors by means that are known to be statistically inadequate, but constitute the current professional standard. Lack of continuity of care may increase suicidal risk. When suicides occur, the usual special conferences, which emphasize error detection and correction, guided by hindsight, may further the shame, guilt, isolation and sense of inadequacy that we found prevalent amongst the therapists whose patients suicided. The concomitant silence of senior clinicians regarding their experiences with suicided patients deprives the trainees of role models for dealing with this tragic professional problem. We must continue to train according to the best current professional standards, without colluding with the trainees wish for certainty and specificity. We must show to the

students that not all suicides can currently be predicted but that fact should spur us on to learn more about the phenomena rather than to languish in shame and guilt or give up. To the extent that training programs can foster continuity of care, they may further reduce the incidence of suicide.

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TABLE 1

DEMOGRAPHIC CHARACTERISTICS

PARAMETER	SUICIDES	CONTROLS
AGE (YRS)	32.7 ± 13.0	32..0 ± 13.1
SEX		
MALES	20	20
FEMALES	15	15
RACE		
CAUCASIAN	32	29
NON-CAUCASIAN	3	6
MARITAL STATUS		
SINGLE	21	23
MARRIED	6	6
WIDOWED/DIVORCED/SEPARATED	7	5
OTHER	1	1
RELIGION		
PROTESTANT	8	8
ROMAN CATHOLIC	16	9
JEWISH	7	13
OTHER/NONE	3	3
SOCIOECONOMIC STATUS		
I (HIGHEST)	0	2
II	3	2
III	3	0
IV	11	9
V	2	0
VI	7	5
VII	9	17

TABLE 2

CLINICAL CHARACTERISTICS

PARAMETER	SUICIDES	CONTROLS	
AXIS I DIAGNOSIS			
NONE	1	6	
AFFECTIVE DISORDER ONLY	14	6	p < 0.10
SCHIZOPHRENIA	9	12	
SUBSTANCE ABUSE	5	3	
AFFECTIVE DISORDER + SUBSTANCE ABUSE	2	2	
SCHIZOAFFECTIVE DISORDER	2	4	
OTHER	2	2	
AXIS II DIAGNOSIS			
NONE	15	16	
BORDERLINE/NARCISSISTIC/ INFANTILE	10	5	
AFFECTIVE	0	1	
ANTISOCIAL	0	0	
OTHER	10	13	
PRIOR HOSPITALIZATIONS			
MEAN	3.1	2.4	
STANDARD DEVIATION	3.2	2.6	
NUMBER OF SUBJECTS	35	35	
AMA DISCHARGES			
MEAN	0.68	0.4	
STANDARD DEVIATION	1.1	0.8	
NUMBER OF SUBJECTS	28	24	
LENGTH OF STAY			
MEAN	59.7	68.6	
STANDARD DEVIATION	50.9	109.3	
NUMBER OF SUBJECTS	24	23	
SADS SUICIDAL TENDENCIES			
MEAN	3.6	1.8	p <0.001
STANDARD DEVIATION	2.1	1.3	
NUMBER OF SUBJECTS	35	34	

TABLE 2 (Continued)

CLINICAL CHARACTERISTICS

PARAMETER	SUICIDES	CONTROLS	
SUICIDE ATTEMPTS			
MEAN	2.1	0.5	$p < 0.001$
STANDARD DEVIATION	2.3	1.0	
NUMBER OF SUBJECTS	35	35	
SUICIDAL IDEATION			
NOT PRESENT	8	21	$p < 0.01$
PRESENT	25	14	
HOPELESSNESS			
NOT PRESENT	23	32	$p < 0.05$
PPRESENT	12	3	