

Special Article

PSYCHIATRIC SERVICE IN A CENTRE FOR THE TREATMENT OF POISONING

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Regional centres for the treatment of poisoning are recommended by the Ministry of Health. Some are in existence; others are planned. Their primary purpose must be resuscitation, but most of the patients will have poisoned themselves deliberately and may require psychiatric help once physical health is restored. In this paper we describe a service for the psychiatric screening of such patients, based on our experience in Edinburgh. We aim to show that the requisite assessments can be made before the patients leave the unit and without delaying their discharge.

Ward 3 of the Royal Infirmery of Edinburgh is organized as an acute medical ward with special functions, one of which is to deal with physically ill people who also have a psychological condition complicating their management. The great majority of all poisoned people from the city and near by are sent to it if they require admission. A bed is always available for a patient who needs it, and no case of self-poisoning arriving at the hospital is refused admission.

Patients may be referred by their general practitioner, may be brought by the police or ambulance services answering an emergency call, or may be taken direct to the infirmery by relatives or friends. Each of these three ways accounts for about 30% of cases. The remaining 10% either come spontaneously to the hospital after having deliberately poisoned themselves or are transferred from other hospitals, including mental hospitals.

The ward accepts deeply unconscious patients who may for a period of their stay require to be transferred to special units for assisted respiration or for haemodialysis. Equally it receives many patients whose overdosage has been scarcely harmful physically. It combines the functions of resuscitation centre and observation ward. There are 12 male beds and 8 female beds, together with two single rooms. By no means all these beds are used for cases of self-poisoning, though these comprise about 60% of admissions.

Patients remain the responsibility of the general medical staff, with whom there is continuous liaison. All cases of self-poisoning are referred for psychiatric investigation to assist in their management and to decide the disposal. If both physical and psychological conditions persist, each necessitating further treatment, the disposal is decided jointly.

The psychiatric team consists of a consultant, an experienced registrar, and a psychiatric social worker. In

the ward the chief psychiatric emphasis is upon deciding and arranging the most suitable disposal for the physically recovered patients.

Although the interviews with the patient are frequently therapeutic, no formal psychiatric treatment is undertaken in the ward. Patients who need further in-patient care go to the university psychiatric hospital or to a mental hospital. Out-patient care or social work is arranged where it is indicated, and patients who do not need specialist supervision are returned to the care of their general practitioner.

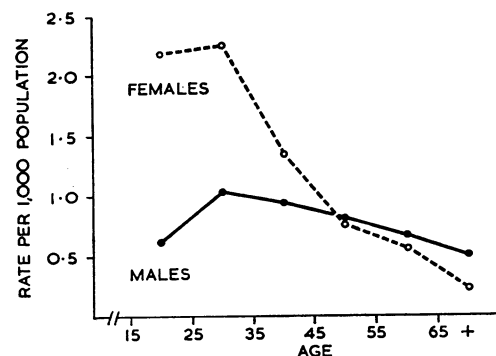
Resuscitation takes precedence. Psychiatric interviews with the patient are not carried out until it is complete. When the patient is admitted, however, arrangements are made for the psychiatric social worker to interview a key informant, generally the patient's spouse or another relative, to elicit not only the story of the present episode but also the full details of a psychiatric history.

When the patient is ready to be seen the registrar carries out a psychiatric examination. Then a clinical conference is held at which the patient is seen by the whole team; social and clinical details are put together and the disposal of the patient is arranged. A full report is made, a copy of which is sent to the general practitioner.

Analysis of One Year's Work

In 1962 490 cases of non-fatal deliberate self-poisoning were admitted to the ward. To characterize the case material we have devised an index based on two items: the expected pharmacological action of the quantity of drug ingested, and also the steps taken by the subject to avoid or to ensure discovery. Using this index of the untreated consequences of the patient's action, we estimate that about a fifth of the self-poisonings would have resulted in death, and that in a further fifth life was endangered. In just over half the cases there was no risk to life even had no medical treatment been available.

Numbers and Rates.—These 490 admissions concerned 436 individuals, 150 men and 286 women. By singling out those who were living within the city boundaries and comparing them with the 1961 census sex-and-age-specific population data



Deliberate self-poisoning. Age-specific rates for Edinburgh adults in 1962.

for Edinburgh we are able to calculate for the first time rates for self-poisoning requiring hospital admission. They are startling: annually 78 per 100,000 adult men and 119 per 100,000 adult women, giving a male/female ratio of 1:1.5. One in every thousand adults in Edinburgh is admitted each year having deliberately poisoned himself. Age-specific rates are shown in the Chart. For both sexes there is a peak incidence in the 25-34 age-group; the subsequent fall in rates with increasing years is very marked for women, less so for men. When allowances are made for differences in age the

single and the married exhibited similar rates, although this finding conceals the very large number of patients who are separated. Widowers show eight times and divorced men forty times the overall rates, but widows and divorced women show only three times the mean rate for women. The high rates for these two categories are accounted for principally by men and women in the 25-34 age-group.

Season.—The monthly occurrence of cases is shown in Table I. Contrary to most reports instancing peak incidence in the spring, April has the lowest number; this is the third successive year in which we have recorded the same phenomenon.

TABLE I.—Number of Cases Occurring Monthly

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
34	33	40	27	35	37	38	53	49	61	44	39

Method of Self-poisoning.—The methods used are shown in Table II. Over half the admissions follow barbiturate overdose. The 13% of cases who took aspirin were mostly youngsters under the age of 25, who presumably have less access to barbiturates. Coal-gas poisoning was used in 9%. Of the 99 (20%) instances where other drugs were used, 30

TABLE II.—Method of Self-poisoning

	Males		Females	
	No.	%	No.	%
Barbiturate	95	56	179	56
Aspirin	21	12	44	14
Other drug	29	17	70	22
Coal-gas	18	11	23	7
Other poison	7	4	4	1
All attempts	170	100	320	100

were with other hypnotics and 31 with psychotropic drugs. There were only 11 (2%) examples of agents not intended for ingestion being swallowed. These were mostly substances such as disinfectants and weed-killers. With the exception of the aspirin cases, where it was generally purchased specially for the act, almost all drugs were obtained on doctors' prescriptions. Unfortunately, hypnotics are nowadays prescribed with great liberality and many of our patients had without difficulty obtained prescriptions specifically with overdosage in their minds. More careful prescribing would almost certainly reduce the number of admissions.

Diagnosis.—Our diagnostic breakdown of the cases is given in Table III. We have not set overmuch store by formal diagnosis. Few patients were psychotic or suffered from organic disorders, and we claim no great exactitude in differentiating between varieties of neurosis, between neurotic

TABLE III.—Diagnosis

	Males		Females	
	No.	%	No.	%
Depression	40	27	137	48
Psychosis other than depression	4	3	17	6
Neurosis other than depression	7	5	31	11
Personality abnormality	43	29	34	12
Mental subnormality	9	6	8	3
Alcoholism as the primary diagnosis*	26	17	8	3
No psychological illness	15	10	48	17
Unassessed	6	4	3	1
All individuals	150	100	286	100

* 30% of the men and 8% of the women had alcoholism as either a primary or a secondary diagnosis.

illness and character disorder, and between the latter and normality. Depressive illness was present in 27% of the men and 48% of the women. Personality disorder was common among the men, in whom also a primary or secondary diagnosis of chronic alcoholism or alcohol addiction was frequent, although, of course, no subject was included in the series if he was admitted only for the treatment of alcoholism. In 10% of the men and 17% of the women we could find no psychological illness or abnormality of personality; neither our findings on mental examination after physical recovery

nor the evidence we obtained about their mental state immediately before and at the time of the act indicated mental disorder. Adverse social circumstances alone seemed to underlie their deliberate poisoning. They included many debt-ridden housewives and jilted girls. In addition to their primary diagnosis 7% of the men and 2% of the women suffered from epilepsy.

Length of Stay in Ward.—7½% of the patients did not even spend one night in the ward, and a further 17% were discharged after 24 hours. More than half the patients were discharged within two days of admission, 90% were discharged in eight days, and only 2% stayed more than a fortnight. This includes the time necessary for physical treatment. The mean length of stay was 3.6 days, being slightly longer for men than for women, and rose with age (Table IV). This reflects difficulty in getting old women accepted by other hospitals.

TABLE IV.—Mean Length of Stay (Days)

Age in Years:	<15	15-	25-	35-	45-	55-	65+	All Ages
Males	1.0	3.7	3.5	2.8	4.8	3.8	5.7	3.8
Females	2.2	2.9	2.7	4.4	3.7	4.6	7.4	3.5
Both sexes	2.0	3.1	2.9	3.8	4.2	4.2	6.5	3.6

Disposal.—The disposal of cases is shown in Table V. A quarter of the patients required transfer for longer in-patient psychiatric care. Just under a half were discharged to out-patient care and for social-work treatment. The remainder returned to the care of their general practitioner; they were

TABLE V.—Psychiatric Disposal. (All Cases Where the Psychiatric Team Decided the Disposal)

	Psychosis and Neurosis		Personality Disorder. Mental Subnormality. No Psychological Diagnosis		All Cases	
	No.	%	No.	%	No.	%
In-patient care	84	33	25	13	109	24
Out-patient care	127	50	77	40	204	46
No psychiatric supervision	44	17	90	47	134	30
	255	100	192	100	447	100

principally people without mental disorder, but some had personality abnormalities which were thought to be too ingrained to benefit from psychological treatment. In 5% of the cases the patients discharged themselves before we could make a decision about their disposal.

Discussion

The rates we have obtained for cases of deliberate self-poisoning requiring admission to hospital are alarmingly high. Yet they are minima; almost certainly a few cases are admitted elsewhere—to other general hospitals, to mental hospitals, or to nursing-homes. Apart from these cases we know that many patients are managed in their own homes and that often the doctor is not called at all. There is a continuum running from an individual doubling the prescribed dose of his customary sleeping-pills to the deliberate production of prolonged unconsciousness or death. The points where the general practitioner and where hospital services need to be involved depend on personal and environmental factors as well as on clinical ones.

Somewhere along this continuum, too, overdosage becomes arbitrarily equated with attempted suicide. Most psychiatrists who have written about attempted suicide have taken their case material for granted. It has consisted of those patients who have been referred to them following a self-destructive act. This referral has been decided by a general physician or surgeon, who tends to select three groups of patients: those who patently remain

suicidal, those who have seriously endangered their lives, and those for whom they want help with disposal.

Ever since it became generally established that the aim of the majority of those who attempted suicide was not death but to call attention to their distress it has become increasingly difficult to define the act. The semantic sheet-anchor has been destroyed. Attempted suicide is neither a diagnosis nor a description of behaviour. It is an interpretation of behaviour and one we have found very difficult to make. In the first place we have had to decide whether the patient poisoned himself deliberately or accidentally. Our policy has been to investigate all doubtful cases and to discard those where we considered that the balance of probability suggested accident. We have found, however, that on full investigation the great majority of cases proved to have been deliberate. Physicians who believe they are giving their patients the benefit of the doubt by regarding their overdoses as accidents are more likely to be doing them a disservice by denying them the advantages of psychiatric examination and care.

The larger problem is to interpret the intent of those who have deliberately taken overdoses. There is no simple guide. Where can one draw a quantitative dividing-line between a distressed patient's taking a larger dose of sleeping-tablets than usual to ensure a good night's sleep and his taking enough to produce unconsciousness sufficient to imperil life? The recovered patient's statements are unreliable. Some falsify; hysterical patients, no longer in danger, exaggerate so as to extract maximum value from their demonstration; depressed patients often attempt to minimize their actions out of guilt or shame or sometimes, even, to obtain their discharge so that they may try again. Others do not remember; they cannot think themselves back into their frame of mind at the time. Still others never bothered to work out what might happen; tablets were taken impulsively without consideration of the outcome.

The quantity of the drug taken is also a bad guide. Doctors may know how many tablets will be fatal but patients do not. Also, the circumstances of the ingestion are very important. It is one thing to take fifty barbiturate tablets at night privately in one's bedroom, quite another to do the same but tell somebody soon afterwards or even to take them publicly. From consideration of what the patient has done we cannot separate a group that has attempted suicide from a group that has not. The index of the untreated consequences of the patient's action which we employ is useful only for describing the case material.

We do not find this failure to separate two groups any disadvantage from the psychiatric standpoint because no simple relationship exists between the degree of danger to life and the seriousness of any psychological disorder present. Many people who have been deeply unconscious we allow to go home after physical recovery because they require only a minimum of psychiatric supervision afterwards; on the other hand, a sixth of the patients who had not risked their life at all needed admission to a psychiatric hospital, and many more needed extensive out-patient care. It is true on the whole that the more "serious" cases are more likely to call for active psychological intervention, but it certainly is not right that mildness of method indicates lack of severity of psychological illness. This is an important reason for carrying out psychological examination on all cases of deliberate self-poisoning

irrespective of the manifest intent or the degree of danger to life.

Our experience is that this screening can most expeditiously be done while the patient is still in the treatment centre. If the service is properly organized his discharge is not materially delayed. When the psychiatrist sees the patient in the ward during the acute stage he has a better chance of persuading him to accept further treatment, and the general medical staff is relieved of the responsibility for the future management of potentially suicidal patients.

Centres for the treatment of poisoning, however, exist primarily to resuscitate, not to retain patients for subsequent psychological treatment. Therefore, if a service is to work successfully the psychiatric team must be prepared to see patients within a few hours of being asked. Otherwise they may be discharged without being screened, for to keep the unit working efficiently there must be a rapid turnover of patients. Just as the general medical staff need to have beds available for the transfer of long-stay medical patients, so the psychiatrist needs to be able to send into mental hospitals without delay any patients needing admission. The unit cannot function effectively if beds remain occupied by patients who are simply awaiting transfer to other hospitals. Sometimes full mental hospitals are reluctant to accept patients, especially elderly patients, as emergencies, since they are already in a hospital bed; but even one or two blocked beds in a small acute unit can impair its functions. A unit for the treatment of poisoning has to keep empty beds always available, and it cannot do this unless patients requiring hospital treatment elsewhere can be transferred immediately.

In this unit the psychiatric team itself provides whatever out-patient psychiatric or P.S.W. care is needed, unless the patient has previously been under another local psychiatrist. This practice has the advantage that before he leaves the ward the patient knows the people he will later be seeing in the clinic, and they, in turn, know him. When he comes back as an out-patient there will be no need for him and for an informant to give a history all over again. There is thus considerable saving both in psychiatrists' time and in patients' emotional energy.

We find that to deal with 500 instances of deliberate self-poisoning a year in the ward and to provide subsequent out-patient care for them requires, weekly, approximately three sessions of a consultant psychiatrist, eight sessions of an experienced registrar, and a full-time psychiatric social worker. This includes the time necessary for writing reports and for some home visiting. Many of these patients would, in any case, have been referred for psychiatric care, so that provision of these services involves a redistribution as much as an extension of existing psychiatric requirements. That we need as much of the P.S.W.'s time as of the psychiatrist's reflects the importance we place upon social work both in elucidating the circumstances leading to the overdose and in dealing with the complicated social nexuses and tangled personal relationships that beset so many of these patients.

Recently we have enjoyed the part-time services of a mental-health officer seconded by the medical officer of health. This help is valuable in dealing with many of the more administrative social problems, especially in connexion with the mentally subnormal.

We consider that a team operating on the lines we have described provides a valuable service to a large number of psychologically disordered or distressed patients at the time when its impact can be most effective. We believe that the early psychiatric interview while the patient is still

in hospital is itself highly therapeutic and also leads to a correct psychiatric disposal of the patients. The variety of the cases seen and the necessity of assessing cases without delay make the work both challenging and rewarding, and we recommend that wherever centres for the treatment of poisoning are set up psychiatrists should take the initiative in arranging similar services.

Summary

The operation of a service to provide psychiatric examination of patients admitted to a centre for the treatment of poisoning is described and its advantages are outlined.

A description of one year's cases from Edinburgh is given. Rates by sex, age, and marital state, the methods used, the diagnosis, and the disposals are presented.

The relationship of deliberate self-poisoning to "attempted suicide" is discussed.

We are grateful to Dr. J. K. Slater for permission to report on the patients under his care and for his constant encouragement to us in our work in the ward. We should also like to thank the ward staff, in particular Sisters Graham and Macfie, for their continued co-operation and help. Mrs. M. McCarthy and Miss N. Young, P.S.W.s, have both taken part in the ward work and subsequent out-patient care, and we are greatly indebted to them.

SOCIETY FOR SOCIAL MEDICINE

[FROM A SPECIAL CORRESPONDENT]

The Society for Social Medicine held its seventh annual meeting at the Queen's University of Belfast from September 26 to 27.

Deaths from Salicylate Poisoning

The first session was opened by Dr. ZENA STEIN (Manchester), who described early experiences with an Atlas survey programme. Dr. S. A. SKLAROFF (Edinburgh) compared the mortality of "pre-fab" dwellers with those living in traditional tenements from the clinical records of an Edinburgh group practice.

Dr. H. CAMPBELL (Cardiff) compared published data for mortality from salicylate poisoning with unpublished data from a 10% sample of hospital in-patient records for discharges and deaths. Age-specific death rates showed a small peak at the age of 1 to 4 years with the male rate twice as high as the female, and a larger peak at ages 55 to 64 years, when the female rate exceeded the male. Case-fatality rates (hospital discharges) were approximately 1%. In the general population, the fatality rate was over 7%, and at age 45 and over was approximately 30%, most of the deaths occurring before admission to hospital.

Cancer and Leukaemia

The second session was concerned with malignant disease and leukaemia. Dr. W. W. HOLLAND, Dr. R. DOLL, and Dr. C. O. CARTER (London) described a further three years' experience (1960-2) in following a group of 1,809 persons with Down's syndrome (mongols), during which period 74 persons died, three of them from cancer other than leukaemia. Total expected mortality in this group, based on national rates, was 6.72, and 1.6 deaths would be expected from cancer other than leukaemia. Combining these findings with previous work on this group with Down's syndrome, 10 cases of cancer other than leukaemia had been found when 4.3 would have been expected ($P=0.013$). Seven cases of leukaemia had been found when 0.53 would have been expected. Excess mortality from leukaemia in this series was limited to those aged less than 20 years. Excess mortality from cancers other than leukaemia was present in all age groups.

Mrs. C. R. BARBER (Oxford) presented data for 3,780 children dying from cancer and leukaemia in the period 1953-60 and their matched controls which had been analysed in respect of incidence and causes of death among siblings, parents, grandparents, aunts, uncles, and first cousins. Siblings of cases had an excess of cancer deaths, and miscarriages were a little more common in case than in control sibships. Major congenital defects, including mongolism, were no more common among case index sibships than their controls. First cousins had an excess cancer mortality and some excess deaths from all causes. Most of this discrepancy was due to deaths under 1 year. Case parents showed no different sickness experience from control parents. Case grandparents, aunts, and uncles also had no greater mortality than their control counterparts. Comparisons with American work agreed in respect of a higher miscarriage rate, but the Oxford data did not confirm more allergies among leukaemic cases or an excess of mongols and serious congenital defects among case sibships.

Miss J. HARLEY and Professor E. M. BACKETT concluded the session on cancer and leukaemia with a presentation of the epidemiological features of stomach cancer in Scotland.

Malformations in a Population

The third session was opened with a paper by Dr. I. M. LECK, Professor T. MCKEOWN, and Dr. R. G. RECORD on malformations in a population observed for six years after birth: 2,462 individuals with malformations diagnosed within six years of birth were identified in a population of 94,476 children (including stillbirths) born to Birmingham residents in 1950-4. The affected children were ascertained from obstetric case notes, local authority registers of stillborn, dead, and handicapped children, and records of hospital admissions and of necropsies. Two-thirds of those affected were described as malformed in obstetric records, and more than half appeared in the registers of the local authority; each service yielded information about some children who were not recorded elsewhere.

Dr. P. FROGGATT (Belfast) and Dr. G. R. FRASER (London) then described a rare autosomal recessive syndrome combining bilateral congenital perceptive deafness, prolongation of the QT interval of the electrocardiogram, syncopal attacks of uncertain origin, and, frequently, sudden death in childhood. Using various methods they ascertained nine cases (in six sibships) among 1,500 deaf adults, and among 3,500 (70%) deaf children attending special schools in the United Kingdom and Ireland.

The session ended with a report from Dr. MAUREEN HENDERSON (Baltimore, U.S.A.), who had found that in both negro women and white women of various parities, smoking habits, and incomes, 98 women with persistent prenatal bacteriuria had significantly shorter gestations than a matched group of 98 controls. Moreover, 404 women with gestations less than 36 weeks had a significantly higher prevalence of persistent bacteriuria at delivery than 404 matched controls. The gestations of women with persistent bacteriuria at delivery were shorter than the gestations of women without bacteriuria at delivery. The author suggested that treatment of significant prenatal bacteriuria at an appropriate time may reduce the risk of premature delivery.

Thieves and Other Delinquents

Mr. J. W. PALMER (Cardiff) produced evidence from a study of juvenile delinquency in the Rhondda Fach that thieves differ from other delinquents. They show the greatest difference from non-delinquents on five variables (size of family, absence of mother, absence of father, unemployment of father, and type of secondary school). On three other variables considered (Sleight non-verbal intelligence test at age 9, Simplex verbal intelligence test at age 11, and school attendance) their difference from the non-delinquents is at least as great as that of any other delinquent group. Those who commit only technical offences occupy a position intermediate between non-delinquents and the more seriously delinquent.

Dr. R. BLANEY, Dr. J. A. D. ANDERSON, and Professor W. J. H. BUTTERFIELD described a survey of factors affecting the flow of out-patients to a south London teaching hospital.