Discharge of Narcotic Drug Addicts Against Medical Advice

JEROME LEVINE, M.D., and JACK J. MONROE, Ph.D.

THE TREATMENT of narcotic drug addicts who voluntarily seek aid, whether in a Federal narcotics hospital, a community facility, or in the private practice of psychotherapy, has proved to be extremely difficult. One major problem has been the finding that the great majority of addict patients will not of their own volition remain in treatment for the period of time thought necessary by their "therapists." This has led some authorities in the field of narcotic drug addiction to recommend the use of court commitment procedures to permit both compulsory hospitalization and provisions for aftercare. Numerous accounts of attempts to treat addict patients on a noncommitted basis both as inpatients in hospitals and as ambulatory patients in clinics are available (*1–4*).

At the Public Health Service Hospital, Lexington, Ky., many so-called voluntary patients who apply for hospitalization are actually under a great deal of legal or court pressure. They have been told by State, county, or city courts to go to the Federal hospital for treatment as a condition of probation or suspension of sentence. In reality, hospital authorities have no commitment from the courts; nor have legal provisions for holding such patients, referred to as "pressure volunteers," against their wishes been enforced. Thus, many patients are admitted to the Federal hospital at Lexington under pseudovoluntary conditions, that is, being under legal mandates of non-Federal courts, but not actually committed to the treatment facility.

During the fiscal years 1960 and 1961 approximately 74 percent of the voluntary (nonprisoner) addict patients admitted to the Federal hospital at Lexington were discharged against medical advice (AMA). Of the total number of AMA discharges, about 25 percent occur within the first 9 days of hospitalization, 70 percent between the 10th and 89th days, and the remaining 5 percent after patients have remained in the hospital 90 days or longer. (These percentages are based on unpublished data from the medical records section of the hospital.) In order to receive a hospital treatment completed (HTC) discharge a patient must remain at the hospital for about 5 months.

The reasons for this high rate of discharge against medical advice are largely unknown, and this study was undertaken to elucidate and study characteristics which differentiate patients who remain in treatment from those who leave against medical advice.

Method

Selection of subjects. Two samples of voluntary (nonprisoner) male addict patients at least 21 years old and for whom valid psychological test records were available were selected for study. Since psychological testing is usually accomplished on the 10th hospital day following admission, patients leaving the hospital against medical advice before this time are not represented in the sample. Sample 1 was composed of 158 patients who were admitted during the calendar year 1960 (randomly selected from

Dr. Levine is assistant chief psychiatrist and Dr. Monroe was formerly chief of psychology of the Public Health Service Hospital at Lexington, Ky. Dr. Allen Ross, Department of Behavioral Sciences, University of Kentucky Medical Center, Lexington, supervised the preparation of the automatic data processing program and operation of the computer for the study.

all admissions during that year), while sample 2, 70 patients, was composed of all those discharged during May 1962 who met the other criteria.

Collection of data. Hospital records of all 228 patients were reviewed, and patients were classified by type of discharge (HTC or AMA) and condition of court pressure (with or without). These two pieces of information serve as principal criteria (independent variables) in the study.

In addition to these two criteria, three other categories of information were collected from hospital records of sample 1 patients (table 1). The psychological test data represent an attempt to assess certain personality characteristics of these patients. The Psychometric Index of Character Structure (PICS) is a 400-item inventory similar to the Minnesota Multiphasic Personality Index. This index has been standardized on the addict population of this hospital, and a total of 20 personality scales have been derived. Many of these scales have been described previously (*5–8*). The categories of demographic factors, drug history data, hospital recommendations, and patient's attitude toward treatment are composed of items which it was thought might be related to the patient's decision to leave the hospital against medical advice or remain until treatment was completed. Following collection of these data each of the 437 items was dichotomized (yes, no; above or below median score; true, false) and the results punched on cards for automatic data processing. These represent the dependent variables (predictors) in the study.

Table 1. Categories of variables investigated

Category	Number of variables
Psychological test data:	
Psychometric Index of Character Structure (PICS)	400
Personality scales derived from PICS	20
Shipley-Hartford Institute of Living Scale	1
Demographic and drug history data:	
Demographic factors (age, race, education, place of residence [1])	5
Drug history (length of addiction, length of abstinence, age at initial addiction, number of previous admissions, length of present hospitalization)	5
Hospital recommendations and patient's attitude toward treatment:	
Hospital recommendation (psychiatric case study, psychotherapy)	3
Patient's attitude (desire to stay until hospital treatment is completed, desire for individual psychotherapy, desire for group therapy)	3

[1] Residence was evaluated in two ways: north versus south and New York City versus other.

Table 2. Distribution of patients by type of discharge and condition of court pressure

Sample and type of discharge	Without court pressure	With court pressure	Chi square
Sample 1 (1960)	107	51	
Against medical advice	78	21	13. 54
Hospital treatment completed	29	30	
Sample 2 (1962)	54	16	
Against medical advice	36	8	1. 11
Hospital treatment completed	18	8	
Samples 1 and 2	161	67	
Against medical advice	114	29	14. 17
Hospital treatment completed	47	38	

Identical data were collected and coded for sample 2 patients, but these data were not transferred to data processing cards.

Statistical design and the data processing method. Patients were categorized into four groups using the principal criteria of type of discharge (AMA or HTC) and condition of legal pressure (with or without). The frequency of response (yes, no; above or below median score; true, false) to each of the 437 predictor items was then counted for each of the four groups in sample 1. Two-by-two contingency tables and chi squares (corrected for continuity) were calculated after the following seven comparisons of groups were made.

1. Against medical advice discharge versus hospital treatment completed discharge.
2. Without-pressure AMA versus without-pressure HTC.
3. With-pressure AMA versus with-pressure HTC.
4. Without pressure versus with pressure.
5. Without-pressure HTC versus with-pressure HTC.
6. Without-pressure AMA versus with-pressure AMA.
7. Without-pressure HTC versus with-pressure AMA.

Sample 2 was used to cross-validate the findings obtained from sample 1. Although an item analysis of the 400 items contained in the Psychometric Index of Character Structure was not performed on this sample, a number of scales composed of significant items obtained from sample 1 was applied to sample 2. The remaining 37 variables, however, were treated in an identical manner to that described for sample 1.

Results

Effect of legal pressure on AMA discharge rate. The 228 patients in this study were distributed in each of the four categories (type of discharge and condition of legal pressure) as shown in table 2. About 71 percent of the patients without legal pressure leave against medical advice while only 43 percent of those with legal pressure leave against medical advice (chi square=14.17; P less than .001).

Item analysis of PICS questions. Table 3 shows the results of the item analysis carried out on sample 1. The most obvious finding is the relatively small number of items which reach the .05 level of significance out of the total of 400 items. In addition, there was very little overlap between items that differentiate AMA from HTC discharges in the group with legal pressure compared to the group without legal pressure. This could indicate either that the patients with legal pressure leave the hospital AMA or HTC for different reasons than the group without legal pressure or that the items were selected on a chance basis. In an attempt to determine whether these items could

Table 3. Chi-square values [1] for variables differentiating drug addicts under varying conditions of legal pressure and types of discharge

Type of discharge, condition of court pressure, and sample	Psychological test data			Hospital recommendations and patient attitude		
	Number of PICS items [2]	Social maladaptation	Assumed dissimilarity with addicts	Length of stay anticipated	Case study recommended	Psychotherapy recommended
AMA versus HTC (court pressure not controlled)			3. 42	15. 57	11. 59	5. 02
Sample 1	20		. 02	12. 01	7. 47	2. 30
Sample 2			4. 30	2. 83	3. 87	2. 75
AMA versus HTC (with court pressure)		7. 00			4. 86	
Sample 1	9	6. 86			5. 73	
Sample 2		. 27			. 25	
AMA versus HTC (without court pressure)			6. 78	17. 43		
Sample 1	15		. 28	4. 76		
Sample 2			9. 21	14. 26		
With pressure versus without pressure (type of discharge not controlled)				3. 12		
Sample 1	16			4. 82		
Sample 2				. 46		
With pressure versus without pressure (AMA discharge)		7. 75		4. 12		
Sample 1	13	7. 81		. 52		
Sample 2		. 11		5. 05		
With pressure versus without pressure (HTC discharge)						
Sample 1	14					
Sample 2						
AMA with pressure versus HTC without pressure		6. 22				
Sample 1	16	8. 80				
Sample 2		. 18				

[1] Chi square 2.71: P=.10; 3.84: P=.05; 6.63: P=.01.

[2] Number of items from the Psychometric Index of Character Structure which differentiate groups at the .05 level of confidence.

be used as predictors of type of discharge (against medical advice or hospital treatment completed) or condition of legal pressure (with or without) for individual patients, four scales were constructed of the items which were significant at the .10 level for the AMA versus HTC comparison and at the .05 level for the without-pressure versus with-pressure, with-pressure HTC versus with-pressure AMA, and without-pressure HTC versus without-pressure AMA comparisons. These scales were scored on sample 2 for cross-validation, but they failed to discriminate successfully between any of the groups.

Psychological test data. Of 20 scales which are routinely used with the Psychometric Index of Character Structure, only 2 scales successfully differentiated 2 groups. The social maladaptation scale differentiated the patients who left the hospital against medical advice from those who received an HTC discharge within the group which had legal pressure (table 3). If both samples are considered, application of this measure enables one to predict correctly the type of discharge in 67 percent of the cases. The assumed dissimilarity with addicts scale successfully differentiated patients leaving against medical advice from those leaving with hospital treatment completed in the group without legal pressure. If both samples are considered, application of this measure enables one to predict correctly the type of discharge in 60 percent of the cases.

Demographic and drug history data. Of the 10 variables studied in the category of demographic and drug history, 5 are able to differentiate between at least 2 groups. These are race, age, education, previous admission, and length of stay (table 4). It was found that a greater proportion of patients with legal pressure were of the white race than in the group without legal pressure. Patients 30 or more years of age were more likely to complete hospital treatment than patients younger than this. Patients with at least an 11th grade education were present in a higher proportion in the group without legal pressure as compared to the group with legal pressure. Patients who were admitted for the first time were found in higher proportion in the group with legal pressure than in the group without legal pressure. Finally, and for obvious reasons, a greater proportion of those discharged after completing treatment remained at the hospital for at least 40 days compared to those who were discharged against medical advice.

Table 4. Chi-square values [1] for variables of demographic and drug history differentiating drug addicts under varying conditions of legal pressure and types of dscharge

Type of discharge, condition of court pressure, and sample	Race	Education	Age	Length of stay	Previous admissions
AMA versus HTC (court pressure not controlled)			3. 42	59. 50	
Sample 1			4. 24	43. 20	
Sample 2			. 20	9. 30	
AMA versus HTC (with court pressure)				25. 64	
Sample 1				24. 32	
Sample 2				. 76	
AMA versus HTC (without court pressure)				30. 12	
Sample 1				18. 49	
Sample 2				7. 16	
With pressure versus without pressure (type of discharge not controlled)	5. 11	4. 34			5. 33
Sample 1	8. 66	3. 25			4. 82
Sample 2	. 11	. 22			. 17
With pressure versus without pressure (AMA discharge)		4. 60			
Sample 1		3. 02			
Sample 2		. 64			
With pressure versus without pressure (HTC discharge)	7. 51				3. 90
Sample 1	4. 89				4. 93
Sample 2	. 92				. 18
AMA with pressure versus HTC without pressure			3. 00	31. 55	
Sample 1			4. 22	20. 27	
Sample 2			. 18	6. 21	

[1] Chi square 2.71: $P=.10$; 3.84: $P=.05$; 6.63: $P=.01$.

Hospital recommendations and patient's attitude toward treatment. Of the six variables in this category three are significant: length of stay anticipated, recommendation for case study (complete psychiatric evaluation), and recommendation for psychotherapy (table 3). Patients who state, after about 10 days' hospitalization, that they do not intend to stay for the "cure" are much more likely to leave against medical advice at a future date than those who plan to stay for "cure." A greater proportion of patients for whom psychotherapy or complete psychiatric evaluation are prescribed remain for an HTC discharge than for those for whom this recommendation is not made.

Discussion

In general, it is apparent from these data that the decision to leave the hospital against medical advice or to remain until hospital treatment is completed is of multifactorial origin. Thus, it has been shown that legal pressure, personality (as measured by psychological tests), and hospital recommendations for treatment, as well as patient's attitude toward treatment, are important variables in differentiating patients who remain in treatment from those who leave against medical advice.

In view of this multifactorial origin it is not surprising, therefore, that our attempt to devise a scale (item analysis of PICS questions) to predict type of discharge was unsuccessful. A similar attempt by Painting in 1954 (*9*) utilizing the Minnesota Multiphasic Personality Inventory was also unsuccessful.

The single most important variable found in determining whether a patient leaves against medical advice or remains in treatment was the presence or absence of legal pressure. This finding lends support to those who argue for a commitment procedure for the hospitalization and treatment of addict patients. However, it should be noted that in spite of legal pressure 43 percent of these patients left against medical advice. Within the group having legal pressure there was a significant relationship between personality and type of discharge. Patients who scored high on the social maladaptation scale (*5*) left the hospital against medical advice in higher proportion than those scoring low on the scale. This scale conforms well to a commonly held stereotype of psychopathy or delinquency, that is, antisocial or asocial behavior. High scorers on social maladjustment tend to be seen as adhering to criminal codes and values, whereas low scorers tend to be seen as excessively concerned with standards of conscience and conformity. This finding emphasizes not only the multifactorial character of the decision to leave against medical advice but also the strong interactive role between factors. Thus, the social maladaptation scale was able to differentiate AMA from HTC patients within the group having legal pressure but was unsuccessful in doing this in the patients without legal pressure.

Similarly, the assumed dissimilarity with addicts scale was effective in differentiating between patients with the two types of discharges only in those patients without legal pressure. This scale is composed of 25 pairs of items and measures the extent to which an addict's self-perception (based on his endorsement of items written in the first person) agrees with his stereotype of other addicts (based on third person items of similar content). The subject scores one point when he answers the items stated in the first person "true" but answers it "false" when stated in the third person. High scorers assume dissimilarity between self and others, arriving at this dissimilarity by "downgrading" self while "upgrading" other addicts. Patients who score high on this scale and who had no legal pressure remained for a hospital treatment completed discharge in greater proportion than those who scored low on this scale.

It is interesting that a greater proportion of patients with legal pressure were first admissions compared to patients without legal pressure. This may represent an attitude of the courts to send an addict offender who had never been to this hospital for treatment of his addiction to this hospital rather than to prison.

The finding that patients recommended for psychotherapy or psychiatric case study, or both, remained for an HTC discharge in greater proportion than those not recommended can be interpreted in at least two ways. It may be assumed that these patients are selected because they are better motivated for treatment and, therefore, are more likely to stay until hospital treatment is completed. On the other hand, it

may be argued that their formation of a meaningful relationship with a "therapist" in the hospital has been responsible for their remaining in treatment. In reality, both factors are probably operative to some extent.

Summary

Two hundred twenty-eight male voluntary narcotic addict patients admitted to the Public Health Service Hospital at Lexington, Ky., were studied to elucidate factors which might be associated with their leaving the hospital against medical advice or remaining until hospital treatment was completed. A personality inventory of 400 items and 37 other variables were coded on data cards, and statistical analysis was performed using automatic data processing methods.

Both personality and nonpersonality variables, as well as the interaction between variables, were found to be important in determining whether a patient will leave the hospital against medical advice. The presence or absence of court pressure was the single most important variable.

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Reorganization for Changed Role

Recent reorganization of the central office of the New York State Department of Mental Hygiene is designed to accommodate the department's new and expanding responsibilities, according to the State commissioner of mental hygiene, Dr. Paul H. Hoch. No longer just an administrative center of institutions, the office is now accountable for the formulation of mental health policy for the entire State and for the integration of resources at the State and local level for a comprehensive program for the mentally ill and the mentally retarded. It also is in charge of three principal areas of service operation, the mental hospitals, the State schools for the retarded, and the community mental health services.

The reorganization, which followed a full-scale study of the department's responsibilities, is expected to facilitate implementation of the comprehensive master plan for mental health outlined by Governor Nelson Rockefeller in January 1962. Two of five regional mental health planning representatives to serve on a 2-year project to develop a working pattern for implementation of the master plan have been appointed.