



Patient Requests for Discharge from Voluntary Psychiatric Hospitalization: a Chart Review

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Abstract

The purpose of this study was to examine the rate of 72-hour letters (written requests for discharge, with 72 hours indicating the time the hospital has to discharge or seek retention) placed by voluntary psychiatric inpatients at a New York City hospital and determine whether there are factors contributing to the rates of discharge requests. Charts from all voluntary psychiatric hospitalizations during the calendar year 2007 were retrospectively reviewed. Included were all single voluntary admissions by adults (age 18 years and older) to the hospital. A confirmatory factor analysis (CFA) was conducted with the following factors: urine toxicology, cigarette use on admission, suicidal ideation upon presentation, employment, past inpatient psychiatric admission, and admission day. A linear regression was used to evaluate the relationship between discharge requests and these factors. Of the total sample ($N=581$), 119 (20.5%) patients submitted 72-hour letters. The stepwise linear regression analysis confirmed a positive relationship between letter placement and admission day ($M=3.5$, $SD=1.7$), unemployment ($M=4.7$, $SD=2.1$), suicidal ideation ($M=.5$, $SD=.5$), positive urine toxicology ($M=.47$, $SD=.5$), previous psychiatric hospitalization ($M=.7$, $SD=.5$) and cigarette usage ($M=.5$, $SD=.5$) $R^2=.043$, ($F(6, 461)=3.42$, $p=.003$). These specific variables accounted for 55.6% of likelihood of a patient submitting a 72-hour letter. Several factors, related to substance and tobacco use, employment, and recurrent use of inpatient services, likely contribute to requests for early discharge. Addressing these factors may help improve inpatient care, reduce costs and improve patient outcomes in the long term.

Keywords Admission · 72-hour letter · Discharge · Voluntary · Retention · Against medical advice

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Introduction

In the United States, 60% of psychiatric admissions at non-state and non-forensic psychiatric hospitals (i.e. private psychiatric hospitals and psychiatric units at general hospitals) are voluntary [1]. In the State of New York, adult patients seeking voluntary admission have to sign a legal form, MHL 9.13 [2] stating that they agree to be admitted to a locked inpatient unit, and that they agree to stay on the unit for at least 72 hours to allow the team to evaluate and offer treatment, which the patient can refuse. Patients wishing to revoke their voluntary admission may put in a letter, known in colloquial terms as a “72-hour letter,” indicating to the treatment team that they want to be discharged. The inpatient psychiatrist then has, from the date of the letter, 72 hours to either discharge the patient or file court papers for retention [2].

In contrast to requested discharge from a voluntary admission, there has been ample research on discharges against medical advice (AMA) [3–6]. The rates of discharges AMA from psychiatric hospitals is estimated to range from 3 to 51%, with a mean of 17% [3]. Most reviews of AMA discharges from medical units have reported higher rates among those with mental and substance use disorders, men, younger patients and African-Americans [6–9]. Pages et al. reported in a factor analysis that, compared to non-AMA discharged patients, psychiatric inpatients with AMA discharges were more likely to have the following characteristics: large quantity of a substance or substances, more than two previous inpatient admissions, ethnicity other than Caucasian, male gender, mild or no suicidality at admission, unemployed and living alone, more severe symptoms upon discharge, and shorter lengths of stay [4]. A review by Brook et al. confirmed that the factors most predictive of discharging from an inpatient psychiatric unit AMA included male gender, younger age, comorbid substance and personality disorders, and uncooperative and disruptive behavior, along with multiple prior hospitalizations and previous AMA discharges [3]. While these studies are informative of the factors contributing to early discharge and disrupted care, they do not tell the full picture of the characteristics of patients who request early discharge via 72-hour letter.

According to the statutory review by Garakani et al., 49 of the 51 jurisdictions (including District of Columbia) have laws guiding the rights of patients seeking to revoke their voluntary admission status [10]. The most common length of time that patients can be held after a request for discharge is 72 hours including weekends and holidays. The common reasons patients seek discharge from a locked psychiatric unit include a sense of a loss of freedom, being unable to come and go, limited access to personal possessions including mobile phones, or inability to smoke cigarettes [10, 11]. Anand et al. reported that conversion to voluntary status by patients admitted involuntarily was strongly correlated with smoking status, indicating that there are external reasons for patients seeking discharge [12]. There have been limited studies of voluntarily admitted patients who seek discharge from psychiatric hospitals by placing 72-hour letters within the given literature. Furthermore, it remains unclear what contributing factors can increase/decrease discharge requests, the percentage of these patients who go to court, and how many are retained or discharged.

The purpose of this study is to examine the rate of 72-hour letters placed on inpatient psychiatric units at a New York City academic medical center, and retrospectively examine charts from the entire hospitalization, from the psychiatric emergency room to discharge, to determine whether there are factors contributing to the rates of patients demanding discharge.

Methods

Data Collection

This study was conducted at an academic medical center in New York, NY, during the calendar year 2007. The study was approved by the Institutional Review Board at the Mount Sinai School of Medicine, through a retrospective chart review, with a request for waiver of informed consent for medical record review sought and approved on February 15, 2008. Inclusion criteria were all adult (18 years and old) patients with single admissions to a psychiatric hospital in the fiscal year 2007. Only patients admitted voluntarily between January 1, 2007 and December 31, 2007 were included, regardless of source of admission. Exclusion criteria included: all involuntary psychiatric admissions, repeat psychiatric hospitalization (2 or more admissions during 2007), any patients under the age of 18 years, any charts that were missing from the electronic or paper records systems, or charts missing relevant documentation including admission or discharge notes or information that could not be gleaned from other data sources.

Of the 1642 patients who were admitted to the hospital's inpatient psychiatric units in 2007, 946 were voluntary and 630 were involuntary, with 66 admissions having no records. The 349 repeat voluntary admissions were excluded, leaving 596 single-voluntarily admitted patients for 2007. Of the 596 patients, 15 charts had no record or incomplete records and were thus excluded, leaving 581 patients for inclusion. Using standardized data collection sheets, the following information was obtained from the 581 charts: age, sex, race, marital status, primary language, presence/absence of children at home, living situation, employment, insurance, time/day of presentation, chief complaint, presence/absence of suicidal or homicidal ideation or plan, past suicide attempt(s), past psychiatric hospitalizations, urine drug and alcohol screen, admission psychiatric diagnoses, smoking status, placement of a 72-hour letter, discharge date, and discharge diagnoses.

There was interobserver agreement completed on 24% of the charts, completed by 2 of the psychiatrist investigators (AG & AA), in order to ensure accuracy of the data collection. There was 100% agreement between the 2 investigators, and, since no disagreements arose, there was no need to refer to a designated third reviewer.

Data Analysis

All statistical analyses were conducted by IBM SPSS Statistics version 24. Bivariate comparisons of demographic characteristics of participants across duration of play were conducted using χ^2 tests for categorical variables and analysis of variance for continuous measures. A confirmatory factor analysis (CFA) was performed to assess the relationship between the seven factors (positive urine toxicology screen, current cigarette user, suicide ideation upon presentation, current employment, past admission to psychiatric unit, and admission day and placement of 72-hour letter). Previous literature [5] has individually evaluated previous factors to potential contribution of early discharge; however, the factors were identified through exploratory means as to identify potential theoretical predictors. The added benefit of using a CFA is to evaluate goodness of fit across the previous factors [13]. Given this, the CFA was employed to investigate how well the assessment predicted these factors. An additional linear regression was used to evaluate the relationship 72-hour discharge requests on the current seven factors. All variables were continuous allowed to standardize scores based on different number of items within functional category and degree of relative relationship [14].

Results

Of the 581 case records collected, 272 (47%) identified as female, 45.8 (SD = 15.7). There was a good representation of minorities in the current sample in which, 31% ($n = 184$) were Hispanic, and 29% ($n = 162$) were Black. A complete description of the patient's demographics are on Table 1. The majority sampled in study were unemployed 33% ($n = 191$) or on disability 26% ($n = 153$). Surprisingly, we did not see any trends with the sub-sample of the 72-hour notice.

Initially, factorability of the grouping was examined using several established criteria. A total of 6 of the 7 correlated at a minimum of .30 with at least one other item, suggesting reasonable factorability. Kaisere-Meyere-Olkin measure of sampling adequacy was .580 just below the recommended value of .60. Bartlett's test of sphericity was significant ($\chi^2 = (21) = 143.7$, $p > .001$). Diagonals of the anti-image correlation matrix exceeded .4, supporting

Table 1 Demographics of sample

	Total Sample ($N = 581$)	Percentage (%)
Age (in Years), (SD)	44.1 (14.5)	
Race		
White	214	36%
Hispanic	184	31%
African American	162	29%
Asian American	15	3%
Other	6	1%
Marital Status		
Single	329	57%
Divorced	73	13%
Widowed	31	5%
Married	101	17%
Separated	40	7%
Other	9	2%
Residence		
Owns Home	307	53%
Family Home	122	21%
Group Residence	22	4%
Nursing Home	15	3%
Shelter	34	6%
None	49	8%
Other	27	5%
Employment		
Full	100	17%
Part-Time	14	2%
Student	18	3%
Retired	40	7%
Unemployed	191	33%
Public Assistance	24	4%
SSI/D	153	26%
72-Hour Notice ($n = 119$)		
Monday	19	16%
Tuesday	13	11%
Wednesday	18	15%
Thursday	20	17%
Friday	29	24%
Saturday	7	6%
Sunday	13	11%

inclusion of each item in the factor analysis. Communalities showed 6 of the 7 questions above .400, confirming that all other items shared some common variance. Therefore, factor analysis was conducted with all 7 items (see Table 2). A confirmatory factory analysis (CFA) was performed to examine the data. This was completed by a principal component analysis (PCA). The PCA was used because the primary purpose was to identify and compute scores for the factors underlying the VGFA. The initial PCA forced the number of factors in the extraction to four. The first factor explained 23.3% of the variance, the second factor explained 16.9% of the variance, and the third factor explained 15.4% of the variance. The three-factor solution, which explained 55.6% of the variance, was preferred because of its previous theoretical support (Hancock & Mueller, 2010) and is displayed in Table 3. A varimax rotation provided the best defined factor structure. All questions loaded over pre-established criterion of .4 and resulted in three complete factors.

Additionally, a stepwise linear regression analysis revealed a positive relationship between those who put in a 72-hour letter and admission day ($M = 3.5$, $SD = 1.7$), employment ($M = 4.7$, $SD = 2.1$), SI ($M = .5$, $SD = .5$), positive UTOX ($M = .47$, $SD = .5$), past admission ($M = .7$, $SD = .5$) and cigarette usage ($M = .5$, $SD = .5$) $R^2 = .043$, $(6, 461) = 3.42$, $p = .003$].

Discussion

The current study is the first known report on factors related to patient request for discharge from voluntary psychiatric hospitalization in the US. The statistical methods used in this paper identify seven specific variables that account for 55.6% of the likelihood of a patient submitting a 72-hour letter, including urine toxicology results at time of admission, self-reported smoking status at time of admission, self-reported suicidal ideation at time of admission, employment status at time of admission, and any history of previous psychiatric admissions. Each of these factors is discussed below.

Table 2 Correlation matrix of factors

		admit_day	UTOX	pastadm	smokes	hour_72	SI
Correlation	admit_day	1.000	.015	.036	-.003	.120	.019
	UTOX	.015	1.000	.097	.276	.160	.153
	pastadm	.036	.097	1.000	.179	.029	.042
	smokes	-.003	.276	.179	1.000	.086	.136
	hour_72	.120	.160	.029	.086	1.000	-.009
	SI	.019	.153	.042	.136	-.009	1.000
	employment	-.005	.025	.316	.159	.021	.047
Sig. (1-tailed)	admit_day		.375	.221	.475	.005	.339
	UTOX	.375		.019	.000	.000	.000
	pastadm	.221	.019		.000	.265	.184
	smokes	.475	.000	.000		.032	.002
	hour_72	.005	.000	.265	.032		.421
	SI	.339	.000	.184	.002	.421	
	employment	.458	.297	.000	.000	.323	.156

UTOX = urine toxicology, smokes = active cigarette use, SI = active suicidal ideation, employment = status of employment, past adm = past admission in the last 12 months, hour_72 = 72 h letter submitted, admit day = admission day

Table 3 Three-factor confirmatory factor analysis (CFA)

Total Variance Explained							
Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings			
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	1.629	23.267	23.267	1.629	23.267	23.267	
2	1.181	16.873	40.140	1.181	16.873	40.140	
3	1.080	15.432	55.572	1.080	15.432	55.572	
4	.945	13.507	69.079				
5	.799	11.417	80.496				
6	.710	10.140	90.636				
7	.655	9.364	100.000				
		Component					
		1	2	3			
UTOX	.739		-.017	.210			
smokes	.643		.302	.048			
SI	.605		-.047	-.173			
employment	.014		.806	-.038			
Past adm	.088		.784	.058			
hour_72	.182		-.021	.734			
Admit day	-.135		.041	.724			

Varimax Rotation Method with Kaiser Normalization; UTOX = urine toxicology, smokes = active cigarette use, SI = active suicidal ideation, employment = status of employment, past adm = past admission in the last 12 months, hour_72 = 72-hour letter submitted, admit day = admission day

A positive urine toxicology screen appears to increase the likelihood of submitting an early request for discharge. On the surface, it is likely that patients with positive urine toxicology screens suffer from substance use, and may want to leave the hospital to use—either as a result of cravings or to preempt withdrawal. Another possibility is that patients could perceive that their substance treatment needs are not being met on the inpatient unit, and choose to pursue care in a setting devoted to substance use like rehab. Alternatively, the patient's depression, suicidality or psychosis could have abated quickly, and the patient may not be interested in treatment, strongly suggesting that the psychiatric symptoms on admission were substance-induced. This finding is consistent with the research done on patients requesting AMA discharge which emphasizes the positive correlation between substance use and AMA discharge [4–6].

Smoking tobacco at presentation appears to increase the likelihood of submitting a 72-hour letter. The most likely explanation for this finding is that individuals who smoke tobacco may continue to crave nicotine after admission as nearly all psychiatric units in the United States are now smoke-free, including the institution at which this study was conducted. Smoking replacement therapies, while often effective, may either be under-dosed or under-utilized on psychiatric units [15]. One study reported that patients on involuntary status who were smokers were more likely to convert to voluntary status and most likely to take advantage of smoking breaks [12]. In NY State, at the hospital in question, there were no allowances for “smoke breaks” and patients who wished to smoke and declined nicotine replacement may have felt compelled to seek early discharge. This is supported by findings from other studies of inpatient lengths of stay in smokers vs. non-smokers which state that patients who smoke are not given nicotine replacement therapy are more than twice as likely to discharge from the hospital AMA [16].

Not surprisingly, the day of admission was found to be one of the seven critical factors in the CFA. Potential contributing sub-factors can be formulated through the examination of the demographics; in which 30% of the sampled individuals do not own their residence or reside in a families' home, and over 33% were unemployed. Additionally, no difference in the variance between days of admission and what days 72-hour letters were placed was noted. Given the current findings and limited research on days of admission [8, 17] it is premature to speculate on the causality. At this point, this information can be used to support and extend the current research.

Suicidal ideation at time of presentation appears to increase the likelihood of submitting an early request for discharge. One explanation may be that patients who are genuinely thought to be at high risk of suicide are likely to be admitted on an involuntary basis, so those reporting suicidal ideation who are still admitted voluntarily are likely to be perceived to be at lower risk either because their suicidality is less profound, they do not have intent or plans, or possibly it is shorter in duration. Such patients are genuinely likely to prove less suicidal more quickly than those with entrenched, long-standing suicidality, who are likely to have been admitted involuntarily. When they feel better, or their suicidal ideation has remitted, these patients are likely to request discharge. Another explanation is that the individuals were expressing suicidal ideation in the context of substance intoxication or withdrawal, and when they became sober, their suicidal thinking abated, and they thus sought discharge. This would be consistent with findings of patients with substance use disorders requesting AMA discharge [5].

Unemployment at the time of admission appears to increase the likelihood of submitting a 72-hour letter. Patients who are unemployed may be more likely to have other socioeconomic risks such as being homeless or without health insurance. These individuals might also be more likely to utilize the psychiatric emergency room and hospital for temporary shelter and meals (i.e. secondary gain), but only for a limited period of time [18]. Once the downsides of inpatient hospitalization outweigh the benefits, patients may then seek discharge and thus place a 72-hour letter. This is consistent with findings of AMA discharges among unemployed individuals [17].

A history of prior admissions appears to increase the likelihood of submitting an early request for discharge. This finding also coincides with research done with AMA discharges [5]. It would fit with other findings of this study that patients who have repeat admissions are high utilizers of psychiatric emergency and inpatient services. Interestingly, other demographic information, i.e. race, age, and gender, were not correlated with increased letter placement. Future research should investigate these other categorical variables.

Given that psychiatric inpatient units are highly restrictive places which place constraints on patient freedom in order to maintain patient safety, it is essential to understand why patients, beyond all other specific motivations, may not wish to remain hospitalized. A better understanding of the causes underlying such requests serves three purposes. First, preparing patients in advance for particular constraints, by discussing them and potential coping mechanisms *prior* to admission, might make patients more accepting of their conditions of treatment than if they come to terms with these limitations after admission. Prior warnings can increase patients' sense of self-efficacy and autonomy. For instance, knowing that one has chosen to enter a smoke-free environment may not only allow a patient to brace for such

conditions, but also render them more likely to endure the situation as they chose it for themselves. In addition, some fully-informed patients may simply decline voluntary admissions, reducing the frequency of the often short, non-therapeutic hospitalizations that result from such patients immediately requesting discharge. Second, some of these motives may in fact be malleable. An employed patient who makes arrangements in advance with her boss for coverage during their hospitalization may display far less anxiety regarding the consequences of missed work. Third, it is possible that these requests may themselves prove a warning sign in certain subsets of patients: Such a request by a patient at high risk of impulsive suicide, being treated specifically for impulse control symptoms, may reveal the state of their progress with a sudden demand for discharge. However, this information is only valuable if one knows that such requests are often correlated with suicidal ideation. If future research identifies specific disease populations in which these correlations are high, that might lead to even more appropriately-targeted scrutiny and improved patient outcomes.

The current study has several limitations. The fact that the data are over 10 years old can affect their applicability in the current environment. However, data utilized in this study are a representative sample of the psychiatric population in that NYC neighborhood and those demographics have not changed since 2007 [19, 20]. Additionally, the NY statute on voluntary admissions and 72-hour letters is the same today as it was in 2007 [2]. Moreover, due to the lack of peer-reviewed data on this given topic, novel information leading to a potential understanding of voluntary psychiatric patients' requests for discharge is valuable. Another concern to note is the lack of generalizability of this sample as the data is limited to one facility in New York City. Future research should evaluate other urban and rural hospital settings to evaluate the preliminary findings. The lack of research-validated diagnostic instruments is another drawback, as diagnoses were based on reports from the attending or psychiatric residents/fellows on retrospective chart review. Due to the fact that this project was completed without any external funding, the authors were not able to extend the scope of the study and increase generalizability due to lack of financial means. Lastly, while the result of the overall variance in the CFA is considered statistically more than appropriate, there may be other categories/variables that affect or influence voluntary admissions/discharges. Further analyses are needed to evaluate this on a more rigorous scale.

Conclusions

The motivations behind patient requests for discharge from psychiatric hospitals remains an understudied area. Once the underlying causes behind these requests are better understood—and this paper strives to be a step in that direction—future researchers will be able to conduct interventional studies in which particular variables are adjusted and their impact on such requests measured. Such research will also enable hospitals and admitting physicians to make more informed decisions on patient admissions, potentially avoiding distress for patients, unnecessary labor for dollars, and expenditures on admissions that are neither therapeutic nor wanted.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee (Institutional Review Board of the Mount Sinai School of Medicine, Project #: HSD08–00052) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Research Involving Human Participants and/or Animals For this type of study formal consent is not required.

Informed Consent Given that this was a retrospective chart review, the request for waiver of informed consent for medical record review was sought and approved by the Institutional Review Board of the Mount Sinai School of Medicine on February 15, 2008.

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Affiliations

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