Factors Associated With Readmission to a Psychiatric Facility

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This study examined patient-related factors that were associated with readmission to a tertiary care psychiatric hospital in Canada. The charts of a random sample of 200 patients were reviewed from an index discharge date in 1991 through subsequent rehospitalizations over the next three years. Eighty-eight patients (44 percent) were readmitted at least once. The only variable that significantly differentiated patients who were readmitted from those who were not was a history of admission. System variables or factors that are not patient related, such as staff attitudes and perceptions, may contribute to readmission and thus may warrant further exploration. (*Psychiatric Services* 52:1100–1102, 2001)

More than three decades of research on frequent users of psychiatric facilities attests to the continuing problem of "revolving-door" patients. Clinical and sociodemographic factors that are associated with readmission have been studied widely, but there has been little consistency in findings across health care systems (1–3).

This study examined data for patients who were readmitted to a provincial psychiatric hospital in southern Ontario and factors that influenced readmission. At the time of the study, the hospital provided services to 280 inpatients and more than 900 outpatients. The facility continues to serve a total population of about 1.6 million in six counties. A centralized emergency psychiatric service generally ensures that individuals who have been hospitalized previously are directed to the same hospital for subsequent admissions.

Methods

A retrospective panel design was used, and data were collected from 1992 to 1995. The clinical charts of 200 randomly selected patients who were discharged in 1991 were reviewed, along with data on any readmissions to the facility over the next three years. A 150-item data collection instrument, which we developed, was used to review the charts. The data analysis included tests of association between continuous variables and readmission rates. Differences between the patients who were and those who were not readmitted were examined with use of chi square tests for nominal data and t tests for continuous data. The significance level was set at .05 or less.

Results

A total of 123 patients (61 percent) were male. The patients' mean±SD age was 36.7±14.2 years (range, 17 to 83 years). A majority of the patients (156, or 78 percent) were without a partner—single, separated, divorced, or widowed. One-hundred and twenty patients (60 percent) had a secondary school education, and 40 (20 percent) had some college or university education. A large proportion—154 patients, or 77 percent—were unemployed; 22 patients (11 percent) were either employed full-time or self-employed. Sixty-six patients (33 percent) had a primary diagnosis of schizophrenia at the index discharge, 56 (28 percent) had a primary diagnosis of mood disorder, 25 (13 percent) of schizoaffective disorder, and 21 (10 percent) of personality disorder.

Reasons for index admission

Many charts listed more than one reason for a patient's 1991 (index) admission. From the clinicians' perspective, the most commonly reported reason was worsening of symptoms, which was listed in 168 (84 percent) of the patients' records. Other reasons were aggression (60 patients, or 30 percent), concerns about risk of suicide (58 patients, or 29 percent), alcohol or drug abuse (44 patients, or 22 percent), psychosocial stress (40 patients, or 20 percent), court-ordered assessment (28 patients, or 14 percent), medication adjustment or destabilization (14 patients, or 7 percent), and medication noncompliance (8 patients, or 4 percent).

The reason for admission that patients cited most frequently was difficulty coping, which appeared in 146 (73 percent) of the patients' records. The next most common reason was persistence of symptoms (128 patients, or 64 percent), which closely paralleled clinicians' reporting of

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worsening of symptoms. However, although clinicians tended to report the worsening of symptoms as being recent, patients described long-standing problems with intractable symptoms. Other reasons cited were difficulties with relationships (80 patients, or 40 percent), medication noncompliance (60 patients, or 30 percent), drug or alcohol abuse (56 patients, or 28 percent), medical problems (28 patients, or 14 percent), and aggression (22 patients, or 11 percent).

Table 1

Readmission patterns over three years among 200 psychiatric inpatients who were discharged from a tertiary care psychiatric hospital in 1991

	Patients		Days in the hospital		Days between admissions	
Admission[1]	N	%	Mean	SD	Mean	SD
Index discharge[2]	200	100	122	377	844	1,527
First readmission	88	44	130	310	269	314
Second readmission	54	27	115	242	194	253
Third readmission	29	14	62	81	226	364
Fourth readmission	15	8	33	29	143	165

[1] Data for the fifth to tenth readmissions are not included because of small numbers of patients.
[2] Days between admissions for this entry is based on 140 patients who had a preindex admission.

Readmissions after the index discharge

During the three years after the index discharge the mean±SD number of readmissions was 1.04±1.67 (range, zero to ten). Eighty-eight patients (44 percent) were readmitted at least once. The numbers of patients who had second, third, or fourth readmissions became increasingly smaller with the number of readmissions, as shown in Table 1. The mean length of stay and the mean time between admissions also declined with the number of readmissions. Patients who were readmitted had significantly more admissions to the study hospital before the index admission—their mean±SD number of admissions was 3.3±3.6, compared with 1.3±2.6 for those who were not readmitted. Similarly, the total number of admissions to any psychiatric facility was higher among patients who were readmitted (mean±SD, 7.3±6.4) than among those who were not readmitted (3.2±5.5).

More of the readmitted patients were male (52 patients, or 59 percent) than female (36 patients, or 41 percent). At the index admission, the readmitted patients were slightly younger than those who were not readmitted: the mean±SD ages were 34.2±11.6 years and 38.2±15.7 years, respectively. A significantly larger proportion of patients who were readmitted were divorced. The readmitted patients were significantly more likely to have had a secondary school education, whereas those who were not readmitted had only a primary education or had attended vocational or technical school. In addition, the group of patients who were readmitted contained a significantly higher proportion of individuals who were unemployed or were employed only part-time or who received social assistance.

Although more than one reason for the first readmission was often listed, physicians cited worsening symptoms for 83 (94 percent) of the readmitted patients, followed by aggression (30 patients, or 34 percent) and alcohol or drug abuse (22 patients, or 25 percent). Persistence of symptoms and difficulty coping were each cited by 81 patients (92 percent) as the predominant reasons for readmission, followed by difficulties with relationships (52 patients, or 59 percent) and medication noncompliance (40 patients, or 46 percent).

Diagnosis was significantly associated with readmission. Although some patients had more than one diagnosis, schizophrenia was the primary diagnosis for 36 (41 percent) of the readmitted patients, followed by personality disorder (29 patients, or 33 percent), mood disorder (24 patients, or 27 percent), and schizoaffective disorder (14 patients, or 16 percent).

A history of aggression was also significantly related to readmission. Of the patients who were readmitted, 20 (23 percent) had a history of aggression, compared with 12 (11 percent) of the patients who were not readmitted. A history of behavioral problems was also significantly associated with readmission: 27 (31 percent) of the patients who were readmitted had such problems, compared with 20 (18 percent) of the patients who were not readmitted. The two groups were not significantly different in terms of history of suicide attempts or physical, sexual, or emotional abuse.

When a correlational analysis was used to predict the frequency of readmission, a strong positive correlation was observed between readmission and history of admission (Pearson's r=.54). Weaker inverse correlations of readmission with age at first diagnosis (r=–.20) and of readmission with current age (r=–.17) were also observed. However, when multiple regression analysis was used, the only significant factor to emerge was history of psychiatric hospitalization.

Discussion and conclusions

In agreement with the key findings of previous research (1–3), the only variable in this study that consistently identified individuals who were at risk of future psychiatric admission was a history of admission. Furthermore, a higher number of previous admissions was associated with a higher likelihood of subsequent hospitalization. This finding is not surprising given that persons who frequently seek psychiatric services often present with a range of complex, recurring problems that are not easily ameliorated and that leave these individuals vulnerable to further crises and hospitalizations.

The fact that clinicians described worsening of symptoms as acute and episodic, whereas patients reported having ongoing struggles with symptoms, underscores differences in interpretation of given problems. Clinicians may be missing an opportunity to focus on critical patient-identified issues. These differences have impli-

cations for assessment and treatment, including the interventions selected and the implementation of such interventions. These patients with repeat admissions clearly require assistance in coping with the routine demands of living as well as with managing their illness (4).

The significance of aggression, behavioral problems, and alcohol or drug abuse as reasons for readmission is also worth noting. It is possible that co-occurring disorders and problems are being ignored or inadequately addressed because staff are concerned predominantly with the treatment of major psychiatric disorders, especially in the case of alcohol or drug abuse. Although it is widely acknowledged that individuals who have severe psychiatric disorders have a high rate of comorbid alcohol or drug abuse (5), mental health facilities may not be equipped or prepared to deal with this problem.

System variables and other factors that are not patient related may influence readmission and may partly explain the lack of consistency in patient variables across studies. For example, the attitudes and perceptions of clinical staff regarding patients who return for further treatment may play a contributing role in readmission. Problems may be handled in a cursory manner or even overlooked if readmitted patients are viewed as "regulars" who have familiar, unchanging issues. Other factors that may affect readmission include internal hospital policies and procedures—for example, intake and discharge planning—and external issues—for example, mandates of community-based services. Such factors and their effects on readmission have not been adequately examined.

Some patients have a high risk of psychiatric readmission. Such individuals can be easily identified on the basis of their prior admission record. However, it is not sufficient to focus only on individual patients. System-related issues that may contribute to rehospitalization should also be identified and addressed. In particular, the attitudes, expectations, and perceptions of clinical staff toward patients who return for further treatment requires further study. ♦

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