Psychiatric and Social Reasons for Frequent Rehospitalization

Suzanne Kent, B.A.
Peter Yellowlees, M.D., F.R.A.N.Z.C.P.

Objective: The authors attempted to identify factors that commonly contributed to the decision to rehospitalize patients who made heavy use of mental health services. Methods: The case notes of 50 patients with frequent readmissions to the South Australian Mental Health Services over a three-year period were examined to identify which of 15 factors most frequently contributed to hospital readmission. Results: Lack of insight or denial of illness was cited in 62.2 percent of the patients' 442 total admissions, followed by relationship problems (61.1 percent), suicidal ideation (44.8 percent), and noncompliance with medication (43.2 percent). When the 15 factors were combined into four major categories, social factors were found to contribute to 38.9 percent of admissions, followed by factors related to psychiatric and physical illness (31.1 percent), dangerousness to self or others (20.3 percent), and substance abuse (9.7 percent). Conclusions: The substantial contribution of social factors to the readmission of patients to acute mental health services is strong evidence that the mental health system must provide appropriate targeted resources and assertive, continuous case management to avoid social crises. Issues surrounding drug and alcohol abuse among heavy users of services must be actively addressed.

Ms. Kent is a social worker and Dr. Yellowlees is chief psychiatrist with the South Australian Mental Health Services in Adelaide, South Australia. Address correspondence to Ms. Kent at Glenside Hospital, P.O. Box 17, Eastwood, South Australia 5063.

Patients who are frequently rehospitalized are a source of concern at the South Australian Mental Health Services because they tend to consume a large proportion of limited public mental health resources. Frequent admissions are also very disruptive to these patients, their relationships, and their links to community-based service providers. In January 1989 the agency embarked on a three-year, descriptive study of 50 heavy users of services in order to better meet their needs. One goal of the study was to investigate factors identified in the case notes as contributors to the decision to admit.

Few studies have focused specifically on reasons for the readmission of patients who make heavy use of services. A review of the literature reveals that predictors of psychiatric hospitalization have commonly been classified into four major categories:

- Client characteristics, including diagnosis, symptomatology, and level of general social functioning
- Sociodemographic factors, including the influence of the client's sex, age, employment status, and ethnicity
- Organizational and system-determined factors, including current hospital policies on admission criteria, and the availability of alternative, non-hospital-based resources
- Characteristics of admitting personnel, including number of years of clinical experience.

The results of those studies are difficult to summarize and compare because the range of variables investigated as possible admission determinants varied from study to study, as did the length of the study periods. Associations were found, however, between readmissions and noncompliance with medication (1,2), low levels of functioning and inadequate social supports (3), current situational factors (4), multiple previous admissions (1), early age at first admission and at onset of illness (1,5), substance abuse (1,6), and a favorable attitude toward admission by the person accompanying the patient (7).

Harris and others (8) investigated both psychiatric and nonpsychiatric indicators for rehospitalization of 31 chronic psychiatric patients after their discharge from a public mental hospital. More than 60 percent of the patients had been readmitted for medical or social reasons rather than for psychiatric indications.

The findings by Harris and others suggest that the state psychiatric hospital serves as a total care institution, providing psychiatric care and some medical services as well as assistance with vocational, financial, legal, recreational, and other matters. We hypothesized that the findings of the study described here would indicate that our hospital also functions as a total care institution. We expected to find that admissions of heavy users of services were frequently the result of varying combinations of social and physical health problems, as well as the result of psychiatric indications, and that substance abuse would be implicated in a significant number of admissions.

Methods

We selected as our catchment area the Inner South area of Adelaide, South Australia. Patients from this

area, which is served primarily by Glenside Hospital, represented 579 admissions to the hospital from July 1991 to June 1992, or 44.4 percent of the 1,399 admissions to the hospital's acute services that year.

Sample selection. Patients were considered heavy users if they had a diagnosed psychiatric illness; had been admitted three or more times to Glenside Hospital over the three-year study period, from January 1989 to December 1991; had been identified by clinical staff involved in their ongoing management as requiring high levels of staff input; and had used inpatient or outpatient services provided by the South Australian Mental Health Services for at least 75 percent of the study period.

A total of 65 patients were initially identified as heavy service users based on consultation with clinical staff in hospital wards serving the Inner South area. After detailed examination of the patients' case notes and examination of South Australian Mental Health Services systems data on number of admissions and length of stay, a sample of the 50 heaviest users was chosen based on the selection criteria described above.

Admission factors. A list of 15 recurring factors contributing to admission was developed based on examination of the patients' case note entries and on clinical experience with the application of admission criteria within our system.

Sections of the case notes were examined for information about the 24-hour period preceding an admission. They included admission clinic attendance sheets and phone records for contacts that preceded admission; the admitting doctor's reports, including assessment and patient profile; the nursing admission assessment sheets; social work entries; and the first inpatient case note entries, which often referred to the circumstances of admission.

Data analysis. The number of times each factor contributed to a decision to admit was totaled. Each factor's total was divided by the number of admissions for all 50 patients to determine the percentage of admissions associated with each factor. The 15 factors were then grouped into four categories. The relative frequency of each category was calculated by totaling the percentages of admissions associated with the factors in each category and dividing by the total percentages of admissions.

Results

Sociodemographic findings and diagnoses. Our findings for sociodemographic variables were similar to those reported by other studies of the heavy-user subgroup (1,9–13). The mean age of the 50 patients was 34.1 years for men and 33.2 years for women, and women were slightly more predominant than men (52 percent to 48 percent). Thirty (60 percent) had never married, 12 were divorced, and eight were either married, living with a partner, separated, or widowed.

Forty-one of the 50 patients (82 percent) were unemployed for all or most of the study period, and all were receiving a federal government pension or benefit. For 28 patients (56 percent), formal education ended at the mid-secondary level, usually at about 15 or 16 years of age.

Twenty (40 percent) of the 50 patients lived alone, eight lived with their parents, and seven shared public accommodations. Four were in the hospital at the time of the study, four were single parents, four lived with partners, and three shared private rental accommodations. Twenty-one (42 percent) lived in general non-mental-health houses or units owned by the South Australian Government Housing Trust, nine lived in their own home or a relative's home, and seven lived in private rental accommodations. The remainder lived in a variety of other accommodations.

A total of 42 subjects (84 percent) were diagnosed as having a major functional psychiatric disorder on axis I of *DSM-III-R,* and 11 had more than one axis I disorder. Schizophrenia was the most frequent axis I illness, affecting 16 patients, followed by schizoaffective disorder (12 patients) and bipolar disorder (ten patients). Personality disorder was present in 21 cases and was the primary diagnosis in five cases.

Comorbidity rates, recorded at the conclusion of the study period in December 1991, were high. Sixteen patients with axis I diagnoses, including diagnoses of substance abuse, also had personality disorder. Ten patients with a diagnosis of alcohol abuse also had another axis I diagnosis, an axis II diagnosis of personality disorder, or both. Five patients with a diagnosis of drug abuse had another axis I diagnosis, an axis II diagnosis of personality disorder, or both. Thirteen patients had significant physical illness as recorded in the case notes in December 1991.

Our findings on the relationship between social factors and heavy use of psychiatric services are the subject of another paper currently under review elsewhere. Medical findings and related issues are also discussed in more detail in another paper.

Admissions data. The 50 patients accounted for a total of 442 admissions over the three-year study period, for a mean±SD of 8.8±6.8 admissions. The number of admissions per patient ranged from three to 40. Subjects had had 10.5±8.7 previous admissions to Glenside Hospital, and their first contact with Glenside occurred 8.1±7.2 years before the study period began.

The mean±SD length of stay was 203.8±165.5 days. Together, the patients were hospitalized for a total of 10,188 days. Subjects with a short length of stay fulfilled the heavy-user study criteria by having high numbers of contacts with the casualty or outpatient departments or community outreach center. Services and expenditure, however, were found to be concentrated markedly in the inpatient area; in fact, 92 percent of total costs could be traced there.

Factors associated with readmission. An average of 5.2 factors contributed to each admission decision, revealing multiple, overlapping problem areas. Table 1 lists the 15 admission factors listed in rank order according to the frequency of their contribution to the decision to readmit.

Psychiatric and other factors. Lack of insight or denial of illness had the highest incidence of any factor, contributing to 62.2 percent of admissions.

Table 1
Factors frequently contributing to the decision to rehospitalize 50 heavy users of inpatient services over a three-year period, by percentage of total admissions (N=442) in which the factor was cited[1]

Factor	Percent of admissions
Lack of insight or denial of illness	62.2
Relationship problems	61.1
Recent suicidal ideation	44.8
Noncompliance with medication	43.2
Problems with accommodations	38.0
Other factors[2]	35.5
Financial problems	27.6
Recent drug abuse	22.9
Recent threat to others	22.6
Recent alcohol abuse	20.8
Recent self-harm	18.1
Noncompliance with outpatient appointments	17.8
Physical health problems	16.5
Employment problems	12.7
Recent violence to others	5.6

[1] More than one factor could be cited for each admission.
[2] Legal problems accounted for the greatest number of factors in this category.

Suicidal ideation was a factor in 44.8 percent of admissions, yet actual suicidal behavior was mentioned in only 18.1 percent of admissions. Some patients appeared to have fabricated reports of suicidal ideation to gain admission. These frequently admitted patients were well aware from previous experience and by talking to other patients that the hospital is legally required to admit patients who present a danger of self-harm. Nevertheless, a review of the case notes for the subjects' entire contact period with Glenside Hospital showed that a past history of suicide attempts or self-harm was present in 74 percent of cases.

Patients' reports of noncompliance were noted in 43.2 percent of readmissions, and noncompliance with outpatient appointments was a factor in 17.8 percent of readmissions. Alcohol abuse and other drug abuse in the previous 24 hours were factors in 20.8 percent and 22.9 percent of admissions, respectively. Because they are based on self-reports or case notes that do not always faithfully reflect missed appointments, noncompliance and substance abuse probably occur at higher rates than indicated by the percentages reported here.

A considerable discrepancy was found between the percentage of admissions associated with reported violence perpetrated by patients in the 24 hours preceding admission (5.6 percent) and with reported physical and verbal threats toward others that did not actually result in violent episodes (22.6 percent). Threats against others appear to have been used at times to gain admission, as were threats of doing self-harm. A review of the patients' case notes over the entire contact period with Glenside Hospital, however, did show that 44 percent of the patients had a past reputation for actual violence.

Social factors. Relationship problems were cited as contributing to the breakdown of community living arrangements in a high proportion of admissions (61.1 percent). Included in this category were references to dysfunction and conflict in relationships, acute loneliness, social isolation, and lack of adequate, continuous social supports from either professionals or natural social networks.

Problems related to accommodations were factors in 38 percent of admissions. These problems included disagreements with other tenants in shared public and private accommodations; complaints by neighbors about patients' involvement in disturbances of the peace, making threats, or invasion of others' privacy; and disputes with landlords concerning unpaid rents and property damage.

These findings were associated with reasonably high itinerancy levels. During the study 18 percent of the patients had periods in which they had no fixed address. Some patients changed address frequently; the number of address changes ranged from zero to 22, with a mean±SD of 3.9±4.9 changes. Actual itinerancy levels could be expected to be higher, as frequent address changes by patients between contacts with our service may not have been recorded.

Financial problems were a factor in 27.6 percent of admissions. They included lack of money for food, rent, and other essentials between fortnightly pension paydays; chronic budgeting difficulties; periods of increased spending during hypomanic episodes; and ongoing stress from accumulated debts.

Almost 13 percent of admissions involved employment problems. Eighty-two percent of the patients were unemployed, and employment problems centered on their understandable unwillingness to accept the role and label of invalid and their desire, realistically or otherwise, to find part-time work or to join a vocational rehabilitation program. Alternately, some patients in a program or those who were being encouraged to work felt they could not cope with the pressure and demands of employment.

Only eight patients (16 percent) actually participated in a vocational rehabilitation program during the study period, although many would have attended prior to the study period. Twelve percent of patients, all women, were responsible for domestic duties and child care. Inability to function in these roles, although a chronic problem, sometimes became critical enough to necessitate hospital admission and emergency child care arrangements.

Legal issues were the largest contributor to the miscellaneous category called "other factors." They included resistance to orders from the guardianship board, attempts to use hospital admission to escape being served by a warrant or appearing in court for offenses committed in the community, or feelings of stress precipitated by the imminence of legal proceedings. In a related finding, case notes revealed that 22 (44 percent) of patients had been convicted of a crime during their period of contact with Glenside Hospital.

Factor groupings. The 15 factors listed in Table 1 were grouped into four categories: social factors, illness-related factors, issues of dangerousness to self or others, and substance abuse. Social factors were cited in

38.9 percent of admissions, illness-related factors in 31.1 percent, dangerousness to self or others in 20.3 percent, and substance abuse in 9.7 percent.

Discussion and conclusions

It is clear that Glenside Hospital was being used over the study period as a total care institution, consistent with findings by Harris and others (8) about use of services by another chronically ill population. Such a role may be seen as appropriate and necessary to meet the needs of patients in crisis to the extent that appropriate targeted support services are not available in the community or are not available continuously, 24 hours a day.

The major contribution made by social factors to the readmissions of these heavy users of services indicates how extensively their management must focus on social issues and on the patient's whole "social world." Carefully targeted resource development and assertive, continuous case management to avert social crises, where possible, may lead to decreased hospitalization rates and improved continuity and quality of life in the community.

The specialty mental health system must improve not only its internal resources but also its relationships and links with primary health care providers; with general agencies in other sectors, for example, in the areas of employment, accommodation, and income support; and with self-help, consumer, and caregiver groups.

Substance abuse—alcohol or drug abuse or both—was frequently a factor contributing to readmissions. The rate reported here is probably a conservative estimate of the real contribution substance abuse makes to the readmission rates of patients in the heavy-user subgroup. The provision of specialist services by mental health care systems, whether community or hospital based (for example, addiction counselors based in admission and outpatient departments and outreach centers) appears to be essential to treat and monitor persistent substance abuse by psychiatrically ill patients.

Improved links with, and education of, drug and alcohol services about the special needs of psychiatrically ill patients are also indicated. Further studies are needed to investigate the causes underlying the co-occurrence of psychiatric illness and substance abuse.

These findings are of therapeutic importance to the management of patients in the heavy-user subgroup and may indicate that patients may be more usefully understood and grouped according to their general functioning rather than by their diagnosis or other characteristics. An interesting next step would be to undertake a more detailed study of interactions among a number of systems, including the psychiatric hospital, general hospital, and social and correctional services, and to examine why individuals are provided with, or excluded from, services.

One result of the partial deinstitutionalization process is a reported rise in the rate of readmissions to psychiatric hospitals, particularly for short-stay patients (5,14). Improving knowledge of the factors that contribute to admission and the breakdown of living arrangements in the community could help advance the development of appropriate non-hospital-based services and could lead to a reduction in the rate of revolving-door readmissions to acute services.

Further studies of patients in the heavy-user subgroup could also assist in improving the ability of mental health systems to predict which patients are most at risk of experiencing revolving-door readmissions. The information gained would enable the systems to target attention to developing optimal management strategies for this vulnerable socially and psychiatrically disabled subgroup of patients, a goal that is consistent with social justice and Australia's National Mental Health Policy (15).

Acknowledgments

Ms. Kent's participation in the study was funded by the South Australian Mental Health Services and the Glenside Hospital Research Foundation. The assistance of Marcia Fogarty, M.B.B.S., F.R.A.N.Z.C.P., is gratefully acknowledged.

References

1. Carpenter MD, Mulligan JC, Bosler IA, et al: Multiple admissions to an urban psychiatric center: a comparative study. Hospital and Community Psychiatry 36: 1305–1308, 1985
2. Casper ES, Pastva G: Admission histories, patterns, and subgroups of the heavy users of a state psychiatric hospital. Psychiatric Quarterly 61:121–135, 1990
3. Mezzich JS, Coffman GA: Factors influencing length of hospital stay. Hospital and Community Psychiatry 36: 1262–1270, 1985
4. Byers ES, Cohen S, Harshbarger DD: Impact of aftercare services on recidivism of mental hospital patients. Community Mental Health Journal 14:26–34, 1978
5. Abramowitz S, Tupin J, Berger A: Multivariate prediction of hospital readmission. Comprehensive Psychiatry 25:71–76, 1984
6. Gorelick D, Irwin M, Schmidt-Ladener S, et al: Alcoholism among male schizophrenic inpatients. Annals of Clinical Psychiatry 2:19–22, 1990
7. Holmes W, Solomon P: Organizational and client influences on psychiatric admissions. Psychiatry 44:201–209, 1981
8. Harris M, Bergman H, Bachrach LL: Psychiatric and nonpsychiatric indicators for rehospitalization in a chronic patient population. Hospital and Community Psychiatry 40:958–960, 1986
9. Evans M, Rice D, Routh C: Patients repeatedly admitted to psychiatric wards. Psychiatric Bulletin 16:157–158, 1992
10. Geller JL: In again, out again: preliminary evaluation of a state hospital's worst recidivists. Hospital and Community Psychiatry 39:963–966, 1986
11. Surber RW, Winkler EL, Monteleone M, et al: Characteristics of high users of acute psychiatric inpatient services. Hospital and Community Psychiatry 38:1112–1114, 1987
12. Vioneskos G, Denault S: Recurrent psychiatric hospitalization. Canadian Medical Association Journal 118:247–250, 1978
13. Green JH: Frequent hospitalization and noncompliance with treatment. Hospital and Community Psychiatry 39:963–966, 1988
14. Gillis LS, Sandler R, Jakoet A, et al: The rise in readmissions to psychiatric hospitals. South African Medical Journal 68:466–471, 1985
15. Australian Health Ministers: National Mental Health Policy. Canberra, Australian Government Publishing Service, April 1992