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Medication Refusal and the Rehospitalized Mentally Ill Inmate

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Records of all inmates committed to a state forensic hospital in fiscal year 1982 (N=472) were studied to examine the inmates' hospital utilization between September 1977 and April 1984 and the reasons for their admissions. Medication refusal, hallucinations and delusions, and threatened or potential violent behavior toward others were the most frequently documented reasons for admission. Medication refusal was associated with a greater number of hospitalizations, shorter hospitalizations, diagnoses of paranoid schizophrenia or schizophreniform disorders, longer prison sentences, and convictions for more serious felonies. Inmates admitted for medication refusal were also likely to be referred concurrently for threatened or potential violent behavior toward others. The study demonstrates the particularly violent nature of a large proportion of the hospitalized mentally ill inmates and the important role of medication refusal in their rehospitalization.

Since 1977 the New York State Office of Mental Health has operated a 250-bed forensic hospital called the Central New York Psychiatric Center. The hospital is the sole provider of acute inpatient psychiatric care and treatment for the 42,000 convicted inmates housed in the 55 prisons operated by the New York State Department of Correctional Services.

Throughout its history, the annual number of readmissions to the forensic center has exceeded the number of new commitments to the state psychiatric hospital. In fact, approximately 60 percent of discharged patients are eventually readmitted. Since the hospital has relatively few inpatient beds to serve the entire New York State prison system (1-3), efficient use of existing beds is an important goal.

Given the general paucity of data concerning inmates who are involuntarily committed for mental health care (4), a study was conducted to explore factors that increase the likelihood of hospitalization and to begin to provide...
an understanding of the ways in which patients who return to the hospital differ from those who do not.

The research was accomplished in two stages. The first phase examined the reasons given by referring or committing physicians to substantiate inmates' need for forensic psychiatric hospitalization. This research, described in greater detail below, revealed that noncompliance with medication was a dominant reason for psychiatric hospitalization of inmates and was significantly correlated with the potential for violence toward others.

In stage 2, hypotheses concerning the relationship between medication noncompliance and several indicators of hospital utilization were developed. These hypotheses were based in part on literature documenting the wide use of psychotropic drugs in the past two decades in both the civil and the forensic mental health sectors. With rare exception (5), studies have reported the efficacy of psychotropics in eliminating psychotic symptoms and preventing or delaying relapse (6–10). The deleterious results of medication noncompliance in civil mental health settings have been well supported (6,7,11).

It has been documented that the state's hospitalized prison inmates have a significantly higher proportion of convictions for murder and other homicides, as well as a greater proportion of violent felony offenses overall, than the general prison population (12). These facts, combined with the results from the first stage of the study, led to the formulation of several hypotheses linking medication refusal with the particularly difficult nature of a large segment of the hospitalized population.

Specifically, it was hypothesized that inmates committed to the forensic hospital for medication refusal would have more violent crimes and longer sentences than other hospitalized inmates, would have diagnoses indicative of a more refractory, noncompliant nature, would be perceived as inappropriate referrals for hospitalization, and would be transferred between the corrections and mental health systems with the greatest frequency and rapidity.

Study subjects

The subjects of the study were the 472 inmates from the New York State prison system who were committed to the Central New York Psychiatric Center during fiscal year 1982-83 (April 1, 1982, to March 31, 1983). The study examined the subjects' total admission history to the hospital from September 1977 through fiscal year 1983-84 (April 1, 1983, to March 31, 1984). The subjects accounted for 1,303 commitments to the hospital during this seven-year period.

The sample included patients whose prison sentences had not expired by the end of the study period so that patients with diverse crimes and varying sentence lengths could be studied. Otherwise, patients with the longest sentences and, in many cases, the most serious crimes would have been excluded from the sample (unless they had been imprisoned many years before the hospital's inception).

Similarly, if the sample had included only those who had served their sentences by the end of the study period, many inmates entering the prison system in the most current years could not have been studied. In addition, the sample would have been limited to 64 inmates, diminishing the reliability and validity of the results.

Stage 1

Methods

In stage 1, the presenting symptoms and behaviors described by referring psychiatrists to document the inmates' need for commitment were analyzed. This information is contained in the referral forms located in the inmates' case records. The documents were abstracted and their content analyzed to determine special categories of problems. A code book, in which each problem category was assigned a numeric code, was developed and refined. All the commitment reasons given in the records were coded and added to the data base.

Some residual difficulties in coding necessarily exist when categorizing overlapping and subjective symptoms and behaviors. For example, it may be difficult to distinguish based on the information provided in the referral documents whether actual or attempted violent behavior toward oneself and refusal to eat should be coded as suicide attempts.

Some psychiatrists regularly indicate that inmates are suicidal if they are depressed or threaten aggressive behavior toward themselves, whereas others use the term only to denote an actual suicide attempt. In fact, a patient may refuse to eat as a measure of protest, because of a belief that the food is poisoned, because of depression, or in an effort to starve to death. Similarly, aggressive violent behavior toward property, such as starting a cell fire, may be a suicide attempt or an act of hostility or protest.

Some of the more cursory statements commonly used to justify hospitalization were "This man is a danger to self [or others] and therefore requires hospital care," or "This inmate has a lengthy previous history of mental hospitalization." These comments fail to provide any insight into the symptoms or behaviors that precipitated the current decision to recommend hospitalization.

Problems of a different sort may occur with some of the richer explanations. These statements suffer from being inconsistent and contradictory, apparently because the physician has thrown in every possible description to buttress the case for commitment. Finally, in some instances, data collection is hindered by the illegibility of the
documents. For these reasons, the behaviors and symptoms described were coded as separately as possible without inferring underlying motives.

The chi square test of independence was used to determine whether there was an association between nominal variables. Percentages are given when they help elucidate the relationships between nonindependent variables. The phi correlation is a measure of association that was used to determine the strength of the relationship between two dichotomous nominal variables.

Results

The 14 most common reasons given to substantiate inmates’ need for hospitalization are listed in Table 1. The three most frequently noted reasons (as indicated by mean number of admissions per inmate) were medication refusal, threatened or potential violent behavior toward others, and hallucinations or delusions. Violence toward property was the most seldom used rationale.

Because more than one reason was often given to justify a referral, crosstabulations were generated to determine which combinations of symptoms or behaviors were most common. Significant positive relations were found between a number of the reasons for commitment, most notably between medication refusal and both categories of violent behavior toward others. Medication noncompliance was associated foremost with threatened or potential violent behavior toward others ($\chi^2 = 30.66$, df = 1, $p < .001$; $\phi = .37$). It was also related to actual or attempted violent behavior toward others ($\chi^2 = 8.71$, df = 1, $p < .01$; $\phi = .20$).

Additionally, medication noncompliance was significantly associated with exhibiting gross, bizarre, or otherwise unmanageable behavior ($\chi^2 = 16.59$, df = 1, $p < .001$, $\phi = .27$), paranoid thinking ($\chi^2 = 10.98$, df = 1, $p < .001$, $\phi = .22$), and hallucinations or delusions ($\chi^2 = 7.47$, df = 1, $p < .01$, $\phi = .18$).

It is noteworthy that there was no relation between medication refusal and threatened, attempted, or actual violent behavior toward self. In fact, these correlations approached zero. The strong association between medication refusal and refusal to eat ($\chi^2 = 49.07$, df = 1, $p < .001$, $\phi = .46$) can be considered an exception to this clear pattern.

Stage 2

Methods

The second stage of the study tested the relations between medication refusal and indicators of hospital utilization during imprisonment. These indicators were number of hospital admissions, length of hospital stay, periods of time in prison prior to rehospitalization, sentence length, and utilization review determination. Correlations between medication noncompliance and both type of crime and hospital diagnosis were also analyzed in an effort to further examine the threatening, violent, and refractory nature of this clientele.

Each inmate's number of hospitalizations and the length of his or her hospital and prison stays were calculated from hospital data on admissions and discharges. Data on admissions and discharges after 1980 were extracted from the hospital's data base; the patients' case records provided information about earlier admissions and discharges. Case records were also the primary source of information about the admitting diagnoses, which were made by hospital physicians in keeping with DSM-III classifications (13).

The hospital's utilization review records were used to determine whether the admission was justified in relation to the facility's stated purposes and relevant State Office of Mental Health criteria. The hospital's utilization review process is conducted in accordance with the federal utilization review
requirements and with the State Uniform Case Record policy. Cases that do not meet the criteria for admission during the first step of the review process are subject to a second review by two physicians. This study recorded the results of all such determinations.

The crime of conviction and length of sentence were obtained from the Warden's or Inmate Record Cards, which are record-keeping instruments maintained by the state corrections department. Crimes were classified into three felony categories used by the State Department of Correctional Services: violent felony offenses, other offenses of violence or coercion, and property, drug, and other offenses (14). Violent felony offenses included murder, robbery, assault, burglary, kidnapping, criminal use and sale of firearms, and arson in the first and second degrees; manslaughter, rape, sodomy, and sexual abuse in the first degree; and criminal possession of dangerous weapons in the first, second, and third degrees.

Chi square tests were again used to examine associations between nominal variables, with phi indicating the strength of the relationship. Pearson's product moment correlation coefficients were used to analyze the correlations between ordinal variables.

**Results**

**Type of crime and length of sentence.** Medication refusal was the only commitment reason statistically correlated with the crime of conviction ($\chi^2 = 10.38$, df = 2, p < .01) and with sentence length ($\chi^2 = 17.09$, df = 5, p < .01). As hypothesized, patients referred for medication noncompliance had the most serious violent felony convictions and the longest sentences. Three-fourths of the patients committed for medication refusal, as compared with half of those hospitalized for other reasons, had been convicted of the most violent felonies.

Together these findings—the abundance of patients who are referred for medication refusal and their extreme likelihood of demonstrating both threatening or potentially aggressive behavior toward others and of having committed the most violent offenses—might be construed as indicators of the particularly violent nature of a relatively large proportion of hospitalized mentally ill prison inmates. Further, the data reveal that the greatest number of referrals for medication refusal are from Attica and Greenhaven correctional facilities, two of the larger maximum-security prisons in New York State.

**Diagnosis.** Patients committed for medication refusal were significantly more apt than other patients to have primary diagnoses of paranoid schizophrenia and schizophreniform disorders ($\chi^2 = 23.98$, df = 7, p < .001). A total of 37.8 percent of the patients committed for medication noncompliance suffered from paranoid schizophrenia, compared with 29 percent of other patients; 23.2 percent had schizophreniform disorders, compared with 12.2 percent of other patients.

The data do not substantiate reports that bipolar and schizoaffective illnesses were more common among patients who refused medication while hospitalized (15). However, they correspond with findings from Massachusetts that forensic patients who contested their medication in court were most commonly diagnosed as having chronic schizophrenia, paranoid type (16).

Contrary to expectations, the hospital diagnoses of the medication refusers did not reflect a more refractory noncompliant nature. With few exceptions, the medication refusers did not evidence diagnoses of conduct disorders, factitious disorders, disorders of impulse control not elsewhere classified, axis II personality disorders, or V-code conditions.

**Utilization of hospital services.** The data suggest that inmates hospitalized for medication refusal, potential or threatened violent behavior toward others, and hallucinations or delusions—are likely to be transferred between the corrections and mental health systems with the greatest frequency and rapidity.

Compared with inmates committed for other reasons, those referred for medication refusal, potential or threatening violent behavior toward others, and hallucinations or delusions were significantly more likely to be rehospitalized ($r = .42$, $r = .46$, $r = .45$, respectively, p < .001, all comparisons). They also tended to have the shortest average lengths of stay at the forensic psychiatric center ($r = .12$, p < .01; $r = .13$, p < .01; $r = .10$, p < .05, respectively).

Patients committed for potential or threatening violent behavior toward others and hallucinations or delusions remained in the correctional system for shorter periods of time before rehospitalization compared with inmates committed for other reasons ($r = .12$, p < .05, and $r = .11$, p < .05, respectively). The findings are consistent with another study reporting that hospitalized medication refusers in a forensic setting had a greater number of previous hospitalizations (4). Studies comparing the lengths of stay of medication refusers and other patients have found them to be shorter (15), longer (4), and not significantly different (17).

Medication noncompliance was the only commitment rationale that was correlated significantly with utilization review determinations of inappropriate referrals ($\chi^2 = 8.19$, df = 1, p < .01). Medication refusal was a reason for the first admission of 50 percent of the inmates who were considered inappropriate referrals according to federally and state mandated utilization review criteria. This finding highlights a potentially important area of concern, especially in light of the fact that patients who are admitted for medication refusal are
likely to be committed approximately three times for that same reason (Table 1).

Discussion
Analysis of the commitment rationale for all admissions of 472 inmates to a forensic hospital during a seven-year period reveals that medication refusal, threatened or potential violent behavior toward others, and hallucinations or delusions were the major reasons used to justify admission and readmission. Inmates hospitalized for these reasons not only have significantly more readmissions than patients committed for other reasons but also have shorter lengths of stay at the forensic hospital.

Inmates referred for medication refusal are very likely to evidence some form of aggressive behavior toward others as a concurrent commitment rationale and to be imprisoned for the most violent offenses. They are also more apt to be considered inappropriate referrals according to utilization review criteria. Patients committed for medication refusal are likely to be diagnosed as suffering from paranoid schizophrenia and schizophreniform disorders.

It has been suggested that the public perception of the mentally ill as aggressive or dangerous is based on a lack of knowledge, fear, and anxiety (18,19). The data collected here are indicative, however, of the particularly violent nature of a relatively large proportion of the hospitalized mentally ill inmates studied.

These data suggest that this subgroup of patients is more threatening to the prison system when they refuse their medication. Indeed, their potential for violence toward others, rather than self-destructiveness, contributes to their hospital commitment. In a sense, inmates who do not comply with medication could be considered among the most problematic to both the corrections and mental health systems, as they appear to be transferred between the two systems with the greatest frequency and rapidity. They are also at risk of rehospitalization for the longest periods because they have the most extensive prison sentences. Utilization review determinations of the inappropriate referral of medication refusers further suggest that this population warrants concern.

In a sense, inmates who do not comply with medication could be considered among the most problematic to both the corrections and mental health systems.

Medication refusal differs from most of the other reasons for commitment because it can be a symptom or behavior that makes the emergence of psychiatric symptoms more likely. The refusal of medication is possible only in a penal system that has no legal mechanism for treating inmates over their objections until the patient has been committed to the hospital (20). While it is beyond the scope of this paper, the issue of forced medication raises a myriad of legal and ethical considerations (2,21-28), including the potentially devastating side effects of psychotropic medications (29,30) and the prospect of abuse or neglect of such a mechanism in the prison system.

It is important to note that although a large proportion of the hospitalized mentally ill inmates are committed and readmitted for the reason of medication noncompliance, data for the 12-month period from November 1, 1986, through October 31, 1987, demonstrate that the vast majority of patients voluntarily accept medication while hospitalized. Only 16 of 677 hospitalized inmates pursued court review of their medication refusal. (The data were gathered by the Central New York Psychiatric Center Fellowship Program in Forensic Psychiatry."

These findings raise the question of why so many inmates discontinue taking their medication within prison but voluntarily accept it while hospitalized. It should be pointed out that the relative compliance noted at the state's forensic hospital occurred during the year following the Rivers v. Katz decision (31), which gave patients a judicial avenue for refusal of medication or delaying its acceptance.

In the civil system, Serban and Thomas (6) observed a marked disparity between the positive attitude toward medication aftercare expressed by patients with schizophrenia and their failure to comply with recommended procedures. Some chronic patients refused medication because it made them feel different from others or interfered with their activities.

Other reasons for forensic patients to refuse medication include the stigma of mental illness within the prison community, the tendency to perceive medication as a form of mind control within a prison setting but as treatment in a hospital, or, as Van Putten and associates reported (32), the desire to maintain a psychotic state as a means of avoiding the reality of a threatening prison environment. As this study indicates, some inmates may simply refuse to eat anything, including medication, before being hospitalized.

Finally, noncompliance, in part, may simply be an available and expeditious means by which the staff or the inmate can gain the inmate's admission to the hospital. It has been suggested that civil patients recidivate as a means of attaining asylum (33). This seeming contradiction in medication compliance before and after hospitalization is certainly worthy of further research and attention.

At a minimum, the data suggest some immediate strategies for beginning to respond to the needs of this relatively large group of violent chronic medication refusal-
ers. One strategy would be to strengthen mental health support services in the prisons that refers to the largest proportion of patients for medication noncompliance.

In addition, hospital and on-site prison mental health programs should be better integrated to improve clinical services, patient tracking, and exchange of information about chronic readmissions as well as to ensure appropriate utilization of inpatient hospital services. Finally, staffing patterns and training programs should reflect the more violent nature of this subgroup of mentally ill inmates.

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