

The Role of Outpatient Commitment in the Management of Persons with Schizophrenia

Project Period

July 1, 1996 - June 30, 1997

Project Objectives

The purpose of this project was to evaluate the effectiveness of outpatient commitment in the management of patients with schizophrenia in Johnson County. Specific project objectives were to:

- identify characteristics that are more likely to be present in persons with schizophrenia and related psychotic disorders who are on outpatient commitment in Johnson County as compared to persons who are not on outpatient commitment in Johnson County; and
- determine the effect of outpatient commitment on psychiatric service utilization by persons who are committed to outpatient treatment at the University of Iowa Hospitals and Clinics (UIHC).

Description of Project

Background and Significance

Persons with mental illness are sometimes placed on outpatient commitment when non-compliance with treatment is anticipated and when non-compliance is deemed to present a risk for dangerousness to self and/or others as a consequence of their untreated mental illness. As opposed to confinement to a long-term facility, outpatient commitment may allow some persons with a chronic mental illness such as schizophrenia to live in the community if they have access to appropriate outpatient psychiatric treatment and adequate social support from family and community resources.

One goal of outpatient commitment is to reduce the "revolving-door syndrome" which can occur when patients discontinue their medication, disengage in community support services, have an exacerbation of their illnesses and may, as a consequence, engage in behavior that is potentially dangerous to themselves or others. Such behavior usually results in rehospitalization, often involving the police or sheriff and the judicial system. After a short stay in the hospital to stabilize psychiatric symptoms, the patients are released back to the community, where the same cycle may be repeated.

Methods

Court Record Review

A request to review court records was submitted to the Johnson County clerk of court and approved. Court records were reviewed for patients who had papers filed by the clerk of court in Johnson County over the five-year period July 1, 1991 - June 30, 1996. This consisted of 1093 records on 977 persons. One hundred persons had more than one record of commitment during this period (87 persons had 2 commitments, 12 persons had 3 commitments, and 1 person had 6 commitments). Therefore the court records provided information on 977 unique individuals.

Selection of Study and Control Groups

From the information contained in the court records, 57 patients placed on outpatient commitment to the UIHC during the study period were identified. Thirty-nine subjects met criteria for study inclusion, that is, were age 18 years or older, had a diagnosis of schizophrenia or other related psychotic illness, and were placed on outpatient commitment to the UIHC between July 1, 1991 and June 30, 1996. Each of the 39 study subjects were matched to a

control subject who was of the same age (within 3 years), gender, diagnosis, and had had an inpatient admission to the University of Iowa psychiatry unit during the 5 year study period.

Study Variables

In order to describe how persons placed on outpatient commitment are different from persons who are not, study subjects were compared to control subjects for the characteristics described below.

- 1) age at onset of illness, defined as age at first psychiatric hospitalization;
- 2) educational history, defined as completing high school education or greater versus not completing high school;
- 3) marital status, defined as a) never married versus all other categories, and b) married or living together versus divorced, single, or never married;
- 4) ethnicity, defined as Caucasian versus non-Caucasian;
- 5) employment, defined as employed versus not employed;
- 6) substance abuse, defined as presence or reported history of substance abuse versus no reported history or current use;
- 7) medication non-compliance, defined as a) reported history versus no reported history of medication non-compliance, and b) use of decanoate neuroleptic versus no use;
- 8) history of treatment failure, or illness refractory to standard therapy defined as a) the use of clozapine and/or risperidone, and b) the number of different neuroleptics used during the study period;
- 9) independent living status defined as a) living alone or with spouse, and b) living in own home or apartment.

The Effect of Outpatient Commitment on the Utilization of Psychiatric Services

In addition to the study group identified through the court records, 42 additional patients who had been committed to UIHC prior to July 1, 1991, and who remained on commitment to the University through at least part of the study period, were identified through records maintained by the psychiatry business office. In the combined group of patients who had a period of outpatient commitment to the University of Iowa Department of Psychiatry during the study period (N=81), service utilization prior to outpatient commitment was compared to service utilization during their period of commitment. Service use variables were defined as 1) all service contacts, 2) scheduled outpatient visits, 3) emergency room visits, and 4) inpatient hospitalizations.

Results

Review of Court Records

A description of the 977 persons with mental health commitment petitions filed in the office of the clerk of court in Johnson County from July 1, 1991, through June 30, 1996, is summarized in Table 1. Characteristics of the subgroup of 274 persons with outpatient commitment are summarized in Table 2.

Table 1: Characteristics of 977 persons with mental health commitment petitions filed in the office of the clerk of court in Johnson County (July 1, 1991 - June 30, 1996).

Characteristic	Cases Reported (N=977)	
Gender	N=975 (99%)	female: 452 (46.3%) male: 523 (53.6%)
Age	N=956 (98%)	mean: 42.6 years range: 14-97 years
Marital status	N=699 (72%)	never married: 249 (35.6%) living together: 216 (30.9%) separated: 18 (2.6%) divorced: 170 (24.3%) widowed: 46 (6.6%)
County of residence	N=973 (99%)	Johnson County: 422 (43.3%) Iowa, other county: 453 (46.5%) out of state: 78 (8.0%) homeless: 21 (2.2%)
Diagnoses	N=935 (96%)	schizophrenia: 158 (16.9%) manic depressive: 149 (15.9%) depression: 141 (15.1%) substance abuse: 124 (13.3%) dementia: 77 (8.2%) other, psychotic: 72 (7.7%) eating disorder: 36 (3.8%) schizoaffective: 35 (3.7%) other, organic: 33 (3.5%) adjustment disorder: 27 (2.9%) personality disorder: 23 (2.5%) two or more diagnoses: 24 (2.6%) other: 36 (3.8%)

Table 2: Characteristics of 274 persons with outpatient commitment in Johnson County (July 1, 1991 - June 30, 1996).

Characteristic	Cases Reported (N=274)	
Gender	N=273 (99%)	female: 118 (43.2%) male: 155 (56.8%)
Age	N=270 (99%)	mean: 39.7 years range: 15-81 years
Marital status	N=193 (70%)	never married: 86 (31.4%) living together: 50 (18.2%) separated: 3 (1.1%) divorced: 48 (17.5%) widowed: 6 (2.2%)
County of residence	N=274 (100%)	Johnson County: 145 (52.9%) Iowa, other county: 112 (40.9%) out of state: 12 (4.4%) homeless: 5 (1.8%)
Diagnosis	N=267 (97%)	schizophrenia: 63 (23.6%) manic depressive: 52 (19.5%) depression: 28 (10.5%) substance abuse: 46 (17.2%) other, psychotic: 16 (6.0%) schizoaffective: 14 (5.2%) eating disorder: 11 (4.1%) adjustment disorder: 5 (1.9%) dementia: 3 (1.1%) two or more diagnoses: 15 (5.6%) other: 14 (5.2%)
Age at commitment	N=265 (97%)	mean: 37.3 years range: 13-76 years
Commitment status	N=271 (99%)	current - no termination date: 85 (31.4%) commitment terminated: 186 (68.6%)
Commitment duration	N=186	mean: 9.6 months median: 6.4 months range: 0.5 to 55.0 months
Agency with outpatient commitment	N=271 (99%)	Johnson County: 156 (57.8%) UIHC: 57 VAMC: 34 Mid-Eastern Iowa CMHC: 41 MECCA/Oakdale: 22 private MD: 2 non-Johnson County 84 (31.0%) substance abuse: 10 VA: 8 CMHC: 32 private MD: 34 agency not specified: 21 (7.7%) cancelled/terminated: 10 (3.7%)

Characteristics of persons listed on petitions for inpatient commitment were compared to those listed on the petitions for outpatient commitment. These are described in Table 3. Persons committed to outpatient treatment, as compared to persons committed to inpatient treatment, are more likely to have a history of non-compliance with medication and reported dangerousness to others.

Table 3: Reason for commitment documented in court records: inpatient versus outpatient.

Stated Reason for Commitment (% yes)	Outpatient (N=274)	Inpatient (N=418)	Statistical Probability
Dangerousness to self	223 (81.3%)	332 (79.4%)	ns
Dangerousness to others	49 (17.9%)	52 (12.4%)	p<0.05
Non-compliance with medication	73 (26.6%)	33 (7.9%)	p<0.01
Severely mentally impaired	141 (51.5%)	195 (46.6%)	ns

Persons with schizophrenia are more likely to be placed on outpatient commitment than are persons with other diagnoses. Of those committed to inpatient treatment, 61/417 (14.6%) have a diagnosis of schizophrenia; of persons committed to outpatient treatment, 63/274 (23.0%) have a diagnosis of schizophrenia. This difference has a statistical probability of p<0.01. Persons with schizophrenia who are on outpatient commitment are also more likely to be on outpatient commitment for a longer duration of time. Of the 186 persons on outpatient commitment with a known beginning and end date, persons with schizophrenia (N=32) had a commitment duration of 14.1 months; the 154 persons who had diagnoses other than schizophrenia had a mean outpatient commitment duration of 8.7 months. This difference was significant at p<0.01.

Characteristics of Persons on Outpatient Commitment versus Control Group

In order to identify characteristics that may increase the likelihood of outpatient commitment, characteristics of persons with outpatient commitment in Johnson County were compared to a group of persons who did not have outpatient commitment in Johnson County. The comparison group was selected so that persons were similar in age, gender, and diagnosis. This information is summarized in Table 4a. The groups appear very similar in characteristics of age of illness onset, ethnicity, marital status, employment, and independent living status. Persons on outpatient commitment in Johnson County were more likely to have completed high school. Rather than being related to commitment, however, this finding is most likely explained by the higher rate of high school completion in Johnson County than most other Iowa counties (91% in Johnson County versus 80% in the state of Iowa). Most members of the comparison group (35/39) did not live in Johnson County.

Persons with outpatient commitment were more likely to have a history of substance abuse, a history of medication non-compliance, a history of having been on a decanoate form of antipsychotic medication, and have taken 2 or more different antipsychotic medications over the 5 year study period. These characteristics are summarized in Table 4b.

Table 4a: Persons on outpatient commitment to Johnson County versus control group. Characteristics that appear to be similar (difference between groups is not statistically significant).

Characteristics	Study Group (N=39) (outpatient commitment)	Control Group (N=39)
Age at commitment or hospitalization	39.3 years range: 18-76 years	41.7 years range: 21-78 years
Age at 1st psychiatric hospitalization (average)	27.7 years	28.3 years
Gender	20 male 19 female	20 male 19 female
Diagnosis	17 schizophrenia 4 schizoaffective disorder 9 manic depressive disorder 4 psychotic disorder, NOS 5 depression with psychosis	17 schizophrenia 4 schizoaffective disorder 9 manic depressive disorder 4 psychotic disorder, NOS 5 depression with psychosis
Ethnicity (Caucasian)	32/39 (82.0%)	35/39 (89.7%)
Marital status -% never married -% married	19/39 (48.7%) 7/39 (18.0%)	21/39 (53.8%) 8/39 (20.5%)
Employment (employed)	6/39 (15.4%)	4/39 (10.3%)
Independent living status -lives alone or with spouse -lives in own home or apartment	21/37 (56.8%) 33/36 (91.7%)	25/36 (69.4%) 33/39 (84.6%)

Table 4b: Persons on outpatient commitment to Johnson County versus control group. Characteristics that appear to be different (difference between groups is statistically significant at p<0.05).

Characteristics	Study Group (N=39) (outpatient commitment)	Control Group (N=39)
Education (HS or more)	34/38 (89.5%)	25/38 (65.8%)
Substance abuse -past or present history of alcohol and/or drug abuse	24/39 (61.5%)	13/39 (33.3%)
Compliance with medications -reported non-compliance -decanoate	32/39 (82.0%) 16/39 (41.0%)	23/39 (59.0%) 8/39 (20.5%)
Treatment failure -number of antipsychotics used during the 5 year study period	0: 2/39 (5.1%) 1: 9/28 (23.1%) 2+:28/39 (71.8%)	0: 6/39 (15.4%) 1:14/39 (35.9%) 2+:19/39 (48.7%)

Effect of Outpatient Commitment on Service Use

In the group of all persons who had a period of outpatient commitment to the University of Iowa Department of Psychiatry during the five-year study period (N=81), service utilization in the 12 months immediately preceding outpatient commitment was compared to service utilization for the period during outpatient commitment. Inpatient admissions, outpatient visits, and emergency visits were recorded and the following service use variables were defined:

- all service contacts;
- scheduled outpatient visits (non-emergency);
- emergency visits (psychiatric only);
- inpatient service use (number of admissions, average length of stay per admission, total number of inpatient days).

The service use of persons on outpatient commitment at the UIHC is summarized in Table 5a. The average period of commitment duration in this group of patients was almost 4½ years, with the longest duration greater than 15 years. The average number of outpatient visits per year prior to commitment nearly doubled following commitment (5.0 versus 9.9), a difference that was highly significant ($p<.01$). In contrast, the number of emergency visits following commitment was reduced to one half of the pre-commitment rate, from .41 visits per person to 0.20, a difference that was also statistically significant at $p<.05$. The number of hospital admissions, lengths of stay per admission, and the total number of hospital days per year were also reduced following commitment, with reductions statistically significant at $p<0.01$.

Table 5a: Service utilization characteristics of persons on outpatient commitment (N=81).

Service Utilization Variable	Pre-Commitment	Commitment Period	Statistical Probability
Duration of time studied (months)	12.0 months	52.6 months range: 1-187 months	na
Average number of service contacts per year	7.1	12.7	$p<0.01$
Outpatient visits (non-emergency) per year	5.0	9.9	$p<0.01$
Emergency visits	0.4	0.2	$p<0.05$
Inpatient service use			
-number of hospital admissions per year	1.3	0.3	$p<0.01$
-number of hospital days per admission	26.7	18.6	$p<0.01$
-number of hospital days per year	33.3	4.6	$p<0.01$

The service utilization pattern in the 37 persons who had a diagnosis of schizophrenia is summarized in Table 5b. Except for a non-significant reduction in the number of emergency room visits, the utilization pattern of persons with schizophrenia is not different from that observed in the entire group of 81 persons on outpatient commitment.

Table 5b: Service utilization characteristics of persons with schizophrenia who are on outpatient commitment (N=37).

Service Utilization Variable	Pre-Commitment	Commitment Period	Statistical Probability
Duration of time studied (months)	12 months	64.0 months range: 60 days-186.4 months	na
Average number of service contacts per year	7.8 range: 0-39	14.5 range: 0-57	p<0.01
Outpatient visits (non-emergency) per year	5.3 range: 0-21	11.3 range: 0-56	p<0.01
Emergency visits	0.5 range: 0-21	0.2 range: 0-1.3	p=0.06
Inpatient service use			
-number of hospital admissions per year	1.2 range: 0-4	0.2 range: 0-1.3	p<0.01
-number of hospital days per admission	25.2 range: 0-91	17.8 range: 0-87	p=0.05
-number of hospital days per year	30.6 range: 0-91	3.0 range: 0-21	p<0.01

Finally, we looked at the subgroup of persons who had their outpatient commitment terminated during the 5 year period of the study (N=47) to see if their pattern of service use was different from persons who had not had their commitment terminated during the study period. Service utilization patterns in the period preceding and during outpatient commitment in the 47 patients who had had their commitment terminated (average duration 31.0 months, range .6 months to 11.6 years) were nearly identical to the findings described in the study group of 81 patients.

An interesting and somewhat unexpected finding was that the record of service use ended prior to the termination date of the commitment in 16/47 persons. Nearly 20% of persons placed on outpatient commitment received services over less than 50% of the duration of their commitment period (8/47). Conversely, many patients continue to receive services after their commitment is terminated.

The mean duration of time that persons on outpatient commitment were engaged in services was 86.0% of the duration of their commitment with a range of 15% to 100%. Of the 47 patients who had their commitment terminated, 35 (74%) received services during 90% or more of their commitment period and 28/47 (60%) of persons who had their commitment terminated continued to use services for at least 30 days beyond the termination of their commitment. This information is summarized in Table 6. Although it is difficult to draw conclusions on a small number of persons and over a limited period of study, it appears as though outpatient commitment promotes treatment compliance in about 80% of patients while they are on outpatient commitment. While about ¾ of this group of patients remain in treatment after commitment is terminated, it appears that approximately ¼ of this group do not continue treatment on a voluntary basis after commitment is terminated.

Table 6: Service use following termination of commitment.

Enrollment in Services Relative to Commitment Status	Proportion (N=47)	Last Documented Service Use (mean, range)
Service use stopped within 90 days of commitment termination	9/47 (19%)	mean: 11.4 days before commitment was terminated range: 5 days before to 84 days after commitment termination
Service use stopped more than 90 days before commitment was terminated	10/47 (21%)	mean: 1232.8 days range: 112 days to 2425 days before commitment termination
Service use continued for more than 90 days after commitment was terminated	28/47* (60%)	mean: 804 days range: 214 days to 1518 days after commitment termination

* 11/28 (39%) of this subgroup appeared to remain in treatment at the end of the study period (i.e., had received services within 3 months of the end of the study period); 15/28 (54%) persons in this subgroup had received services within 6 months of the end of the study period.

Summary

1. Of the 977 persons with papers filed in the Johnson County clerk of court office in the five-year period July 1, 1991 through June 30, 1996, only about ½ (43%) were from Johnson County. Of that group, about 30% were not committed, about 30% were committed to outpatient treatment, and the remainder (about 40%) were committed to inpatient treatment. The most common diagnoses were schizophrenia (17%), manic-depressive (bipolar) illness (16%), depression (15%), and substance abuse (13%). Persons committed to outpatient treatment, as compared to persons committed to inpatient treatment, are more likely to have a history of non-compliance with medication (27% versus 8%) and reported dangerousness to others (18% versus 12%).
2. Of the subgroup of persons who were committed to outpatient treatment (N=274), the most common diagnoses remained schizophrenia, manic-depressive illness, depression, and substance abuse. However, schizophrenia was more likely to be the diagnosis in persons committed to outpatient treatment as compared to persons committed to inpatient treatment. The average duration of outpatient commitment for persons with schizophrenia was also longer than that for persons of other diagnoses (14.12 months versus 8.66 months).

Only about ½ of persons placed on outpatient commitment were from Johnson County (53%), and slightly more than ½ (58%) were placed on outpatient commitment to agencies within Johnson County. The average duration of outpatient commitment was between 9-10 months, with the range being from 2 weeks to 4½ years.

3. In comparing the characteristics of 39 persons with schizophrenia (who were on outpatient commitment to the UIHC) to a control group, the groups appeared very similar in characteristics of age of illness onset, ethnicity, marital status, employment, and independent living status.

Persons with outpatient commitment in Johnson County were more likely to have a history of substance abuse (62% versus 33%), a history of medication non-compliance (82% versus 59%), a history of having been on a decanoate form of an antipsychotic medication (41% versus 20%), and have taken 2 or more different antipsychotic medications over the course of the study period (72% versus 49%) than the comparison group.

4. The average period of commitment duration in a group of 81 patients who were on commitment to the UIHC was almost 4½ years, with the longest duration being over 15 years. The average number of outpatient visits per year prior to commitment nearly doubled in the period during commitment (5.0 versus 9.9 visits), a difference that was highly significant ($p < .01$). In contrast, the number of emergency visits following commitment was reduced to one half of the pre-commitment rate. The number of hospital admissions, the average length of stay per admission, and the total number of hospital days per year were reduced following commitment ($p < 0.01$).
5. The mean duration of time that persons on outpatient commitment were engaged in services was 86% of the duration of their commitment with a range of 15% to 100%. Nearly 20% of persons placed on outpatient commitment received services over less than 50% of the duration of their commitment period. It appears as though outpatient commitment promotes treatment compliance in about 80% of patients while they are on outpatient commitment. After commitment is terminated, about ¾ of that group remain in treatment on a voluntary basis.

Conclusions

This study supports the findings reported by at least three other states. A North Carolina study (Fernandez, 1990) reported a sharp reduction in admission rates and a less dramatic (but significant) decrease in the number of inpatient days in a group of 4179 patients (48.1% with schizophrenia) who were committed to involuntary outpatient treatment in a three-year period. A Washington, D.C. study found a decrease in inpatient admissions and a trend to shorter stays under outpatient commitment (Zanni, 1986). Finally, a recent Massachusetts study matched demographic and clinical variables of 19 persons under involuntary outpatient treatment to a control group and found that persons with involuntary outpatient treatment had significantly fewer admission and hospital days after the court order than the comparison group (Geller et al, 1998).

Outpatient commitment appears to improve compliance with treatment in about 80% of patients. From the data provided in this study, outpatient commitment appears to be successful in reducing hospital and emergency room use by persons who, as a group, are characterized by having a history of medication non-compliance, a history of substance abuse, use of more than two different types of antipsychotic medications during a five year period, and use of a depot form of an antipsychotic medication. Persons with schizophrenia and other psychotic disorders have an increased number of outpatient visits compared to the twelve month period preceding commitment, suggesting that outpatient commitment measures medication compliance.

Direct clinical benefits such as patient and family satisfaction, safety to the community (due to reduced symptoms of psychosis in committed patients), and quality of life could not be determined from the data analyzed in the present study. These and related issues are appropriate topics for future investigation.

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