

A 2-year follow-up of involuntary admission's influence upon adherence and outcome in first-episode psychosis

Opjordsmoen S, Friis S, Melle I, Haahr U, Johannessen JO, Larsen TK, Røssberg JI, Rund BR, Simonsen E, Vaglum P, McGlashan TH
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Objective: To see, if voluntary admission for treatment in first-episode psychosis results in better adherence to treatment and more favourable outcome than involuntary admission

Method: We compared consecutively first-admitted, hospitalised patients from a voluntary ($n = 91$) with an involuntary ($n = 126$) group as to psychopathology and functioning using Positive and Negative Syndrome Scale and Global Assessment of Functioning Scales at baseline, after 3 months and at 2 year follow-up. Moreover, duration of supportive psychotherapy, medication and number of hospitalisations during the 2 years were measured

Results: More women than men were admitted involuntarily. Voluntary patients had less psychopathology and better functioning than involuntary patients at baseline. No significant difference as to duration of psychotherapy and medication between groups was found. No significant difference was found as to psychopathology and functioning between voluntarily and involuntarily admitted patients at follow-up.

Conclusion: Legal admission status *per se* did not seem to influence treatment adherence and outcome

S. Opjordsmoen¹, S. Friis¹,
I. Melle¹, U. Haahr², J. O.
Johannessen³, T. K. Larsen^{3,4},
J. I. Røssberg¹, B. R. Rund⁵,
E. Simonsen⁶, P. Vaglum⁷,
T. H. McGlashan⁸

¹Department of Psychiatry, Oslo University Hospital, Ullevål and Institute of Psychiatry, University of Oslo, Oslo, Norway; ²Early Psychosis Intervention Center and University of Copenhagen, Zealand Region Psychiatry, Roskilde, Roskilde, Denmark; ³Stavanger University Hospital, Psychiatric Clinic, Stavanger, Norway; ⁴Department of Clinical Medicine, Section Psychiatry, University of Bergen, Bergen, Norway; ⁵Asker and Bærum Hospital, Trust and Department of Psychology, University of Oslo, Oslo, Norway; ⁶Psychiatric Research Unit and University of Copenhagen, Zealand Region Psychiatry, Roskilde, Roskilde, Denmark; ⁷Department of Behavioural Sciences in Medicine, University of Oslo, Oslo, Norway; and ⁸Department of Psychiatry, Yale University, New Haven, CT, USA

Key words: first episode; coercion; compliance; psychopathology; outcome

Stein Opjordsmoen, Department of Psychiatry, Oslo University Hospital, Ullevål, Kirkevn 166 Building 20, 0407 Oslo, Norway
E-mail: o.s.e.ihner@medisin.uio.no

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Significant outcomes

- In this catchment area based and fairly representative sample of consecutively first-admitted patients for psychosis, 58.1% were involuntarily admitted.
- Involuntarily admitted patients had more psychopathology and worse functioning at baseline than voluntary patients.
- During 2 years of observation, adherence to treatment was similar for the groups, and contrary to expectations, most clinical improvement was recorded in the involuntary group.

Limitations

- Perceived coercion during admission was not measured.
- Admission was based on Norwegian legislation and publicly funded health services, which limits the generalisability of the findings.
- Although attrition of patients was low, 23.1% refused to give informed consent. A majority of these patients were involuntarily admitted, and adherence and outcome for those we do not know.

Introduction

Adherence behaviour (to what extent patients follow advice about medication, diets or life style) is generally an important issue in medicine. A major concern in the treatment of patients with psychotic disorders is non-adherence with medication. Antipsychotics have been shown to prevent relapses and thereby influence course and outcome favourably, as well as making it possible to do necessary psychosocial work with the patient (1–5). Along with insight into the illness and knowledge of its social and psychological consequences, a good therapeutic alliance is beneficial for adherence (6).

Involuntary treatment, and especially involuntary hospital admissions, is practiced throughout the world. The number of such hospitalisations varies between and even within different countries, and is dependent on legislation, clinical competence, actual resources, traditions and attitudes. Ethical considerations regarding human rights are crucial in this field. Therefore, it is important to know to what extent involuntarily admitted patients improve on clinical variables and subjective quality of life after having been treated. In a review, Katsakou and Priebe (7) described that overall, involuntarily admitted patients improved clinically and functioned better within the next 4 months than at baseline according to the clinicians. Interestingly the majority of the patients themselves reported that it was right that they had been involuntarily admitted and treated. The patients' views tended to be more positive over time and were particularly positive among those with a marked clinical improvement. The findings suggested that the majority of patients were satisfied with the treatment. However, the studies reviewed did not deal with first-admitted patients.

Another review compared the outcome in patients subjected to involuntary vs. voluntary hospital admission (8). One of the reviewed studies found no difference in mortality rates, while three others found that involuntarily admitted patients were overrepresented in the suicide group. Levels of psychopathology and treatment compliance suggested no group differences in voluntary vs. involuntary patients. The methodological quality of these studies was variable and generally wanting as regards clear follow-up time-points and standardised instruments to assess clinical outcome. Moreover, this overview did not report on first-admitted patients.

This communication is based on a study of consecutively first-admitted patients for first-episode psychosis (9–11), where a relatively large

proportion of the patients were admitted involuntarily. These patients are compared with voluntarily admitted patients as to baseline characteristics and at 2 years as to treatment utilisation and outcome.

In a study from Finland it was found that patients, who felt coerced by the admission, were less likely to use medication and visit mental health centres after index admission than did patients who perceived the admission as voluntary (12). This study had a small sample size and did not deal with first-episode patients, but suggests that the use of coercion can result in pushing the patient away from health services. Therefore, it is reasonable to believe that involuntary first admission for psychosis would challenge the therapeutic alliance and lead consequently to poor adherence with psychotherapy and medication. A test of this possible consequence has not been undertaken.

Aims of the study

We hypothesised that voluntary admission will result in better adherence to treatment, fewer rehospitalisations, and more favourable clinical and functional outcome than involuntary admission.

Material and methods

Samples and design

Details of the study are described elsewhere (10), but an overview is outlined here. In the TIPS (early Treatment and Intervention in PSychosis) study altogether 301 patients with first-episode psychosis were recruited consecutively from January 1997 to December 2000. The study included four sites, three in Norway and one in Denmark. Because of different legislations in the two countries, this study includes Norwegian patients only. Inclusion criteria were: 18–65 years of age; meeting DSM-IV criteria for schizophrenia, schizophreniform disorder, schizoaffective disorder, brief psychotic episode, delusional disorder, affective psychosis with mood incongruent delusions, psychotic disorder not otherwise specified; actively psychotic; never adequately treated for psychosis; no neurological or endocrine disorders with relationship to the psychosis; no contraindications to antipsychotic medication; able to speak Norwegian; IQ over 70. IQ was estimated based on past history and clinical examination at baseline (seven patients excluded).

For this study altogether 226 subjects were considered, 141 from Rogaland county, southwest

in Norway, with a total urban and rural population of 370 000 inhabitants, and 85 from the Ullevål sector with a total population of 195 000 from the city and suburbs in the capital Oslo. Nine patients were treated voluntarily as out-patients the first year and were not included. The study sample then consisted of 217 hospitalised patients. The study was approved by the Regional Committee for Medical Research Ethics. After completely describing the study to the participants, written informed consent was obtained.

Involuntary admission was carried out by a physician after clinical assessment and a request from relatives, police or public health officers. Involuntary admission could either be for observation (when the presence of a severe mental disorder was in doubt) or for detention for a long-term period of time (in the case of severe mental illness, here defined as a psychosis). Moreover, at least one of three additional criteria had to be present; dangerousness to self or others, need for treatment or inability to care for oneself.

Instruments

The structured clinical interview for DSM-IV was used for diagnostic purposes (13). Symptoms were measured with the Positive and Negative Syndrome Scale (PANSS) (14). Global functioning was measured by the Global Assessment of Functioning Scale (GAF), and scores were split into symptom scores (GAFs) and function scores (GAFf) to improve the psychometric properties (15). Alcohol and drug misuse were measured by the Drake Scale (16). Duration of untreated psychosis (DUP) was measured as the time from onset of psychosis until start of adequate treatment. Onset of psychosis was estimated as the first appearance of positive symptoms, defined as the first week with symptoms corresponding to a PANSS score of at least 4 on positive subscale items 1, 3, 5, or on general subscale item 9. Adequate treatment was defined as the start of structured treatment with antipsychotic medications or the start of hospitalisation in highly staffed psychiatric wards organised to manage disturbing psychotic symptoms. All raters were trained to reliability in the use of study instruments by rating previously prepared case notes and audiotapes/videotapes before entering the study assessment teams. Reliability of measurements ranged from fair to very good: DUP: 0.99, GAFs: 0.63, GAFf: 0.75, alcohol use: 0.88, drug use: 0.88, PANSS positive sum score: 0.88, PANSS negative: 0.76, PANSS general: 0.56 [intra class correlation (1,1)] (17).

Longitudinal assessments

The treatment system for all patients was catchment area based and publicly funded with no differences in the utilisation of inpatient psychiatric services. Treatment of first-episode psychotic patients was considered a task for the specialised psychiatric treatment system. The program consisted of defined treatment algorithms for antipsychotic medication (low-dose first-generation antipsychotics the first year of inclusion, and low-dose second-generation drugs later, i.e. most of the time). According to the protocol a first-generation antipsychotic in low doses was recommended in 1997 with perphenazine as first choice. In 1998 and later a second-generation antipsychotic was recommended as first choice, preferably olanzapine and with risperidone as second option. As third choice clozapine was recommended. Switching antipsychotics was proposed for those patients where the drug was judged to be ineffective or when side-effects were judged to be serious [previously described in detail (18)]. Additionally, individual psychosocial treatment with a trained psychiatric case worker giving weekly sessions and psychoeducational family work (multifamily groups) were offered. Adherence to treatment was defined as following the weekly psychotherapy program (case worker) and taking prescribed medication (self report). The participants were followed up by independent raters with psychopathological measures after 3 months, 1 year and 2 years. All treatment given for this period was recorded and was given on voluntary basis after discharge from index hospitalisation.

Statistics

Analyses were carried out with the statistical package spss for Windows (version 11) (spss inc, Chicago, IL). Yates corrected chi-square tests or Fisher exact tests were used for categorical variables, Mann-Whitney *U*-test for DUP, and *t*-tests for continuous variables. Two-sided tests were used, and significance was defined at the 5% level.

Results

We believe that almost all eligible first-episode psychotic patients in the catchment areas were found during the recruitment period, but 74 (23.1%) refused to give informed consent. The number of involuntarily admitted among those was 45 (60.8%) vs 18 voluntarily (24.3%) and 11 unknown (data missing) (14.9%).

Table 1. Background characteristics for voluntarily and involuntarily hospitalised patients

	Voluntary (n = 91)	Involuntary (n = 126)	P
Age, mean (SD) years	26.5 (8.1)	28.3 (9.4)	NS
Education, mean (SD) years	12.2 (2.3)	12.7 (2.5)	NS
Female (%)	34.1	52.4	<0.01
Single marital status (%)	73.0	75.0	NS
Scandinavian (%)	97.0	92.0	NS
DUP* median, mean (SD)	10.582 (148.2)	5.276 (56.2)	NS
Alcohol use†	2.0 (0.6)	1.9 (0.6)	NS
Drug use†	1.8 (1.1)	1.7 (1.0)	NS

*Duration of untreated psychosis, weeks

†Drake Scale score, mean (SD)

Of the patients who were included in this study, 126 (58.1%) were involuntarily and 91 (41.9%) voluntarily admitted for hospitalisation. Baseline characteristics are presented in Table 1.

There were 97 female and 120 male patients. Totally 66 of the female patients were involuntarily admitted vs 60 of the men ($P < 0.01$). Otherwise no statistically significant differences between the groups were found.

The involuntary group had higher PANSS excitative component score than the voluntary group at baseline [mean (SD) 10.4 (5.0) vs 8.8 (3.3), $P < 0.01$]. At 3 months, 1 and 2 years it was no significant difference (at 2 years 6.5 (2.4) vs. 6.7 (2.7) respectively). On the other hand, voluntary patients were more depressed. The PANSS depressive component scores at baseline were 12.2 (3.7) vs. 11.1 (3.7) respectively, $P < 0.05$. This difference was kept during follow-up. At 2 years, the values were 9.4 (3.4) vs. 8.3 (2.9), $P < 0.05$.

Involuntary women had significantly higher PANSS excitative component score at baseline than the voluntary group [11.1 (5.5) vs 8.8 (3.3), $P < 0.05$]. The difference between involuntary and voluntary men was not significant [9.5 (4.2) vs 8.8 (3.4)].

Table 2 shows psychopathology and global functioning by type of admission, at baseline, 3 month- and at 2 year-follow-up. Involuntarily

Table 3. Treatment and number of hospitalisations during 2 years by legal admission status, mean (SD)

	Voluntary (n = 78-79)	Involuntary (n = 113-118)	P
Psychotherapy, weeks	90.1 (22.1)	83.9 (29.2)	NS
Medication, weeks	77.8 (32.7)	75.3 (32.7)	NS
Hospitalisations total	1.7 (2.0)	2.0 (1.4)	NS

Table 4. Improvement in scores during 2 years by legal admission status, mean (SD)

	Voluntary (n = 71-74)	Involuntary (n = 110-113)	P
PANSS positive	6.8 (6.1)	9.9 (8.5)	<0.01
PANSS negative	1.9 (5.6)	3.0 (7.9)	NS
PANSS general	7.6 (9.2)	10.8 (12.4)	NS
GAFs	19.6 (16.0)	27.1 (18.8)	<0.01
GAFF	15.9 (15.7)	26.8 (18.9)	<0.001

PANSS, Positive and Negative Syndrome Scale

admitted patients had the worst scores at baseline. Most improvement took place during the first 3 months after inclusion, especially in the involuntarily admitted group, and at 2 year follow-up there was no significant difference.

During the 2 years of follow-up three suicides (two in the voluntarily admitted group) and two deaths by overdose (one in each group) were recorded.

Table 3 shows that there was no significant difference between the groups in adherence to supportive psychotherapy and medication during the observation period. The involuntarily admitted patients had a somewhat higher mean total number of hospitalisations, yet not statistically significant.

There was no significant association between age and outcome. As demonstrated in Table 4, the involuntary group improved more during the 2 years of observation than the voluntary group.

Discussion

We found more psychopathology at baseline in involuntarily admitted patients. Most improve-

Table 2. Psychopathology and function by legal admission status, mean (SD)

	Baseline		3 months		2 years	
	Voluntary (n = 91)	Involuntary (n = 126)	Voluntary (n = 88)	Involuntary (n = 116)	Voluntary (n = 72-75)	Involuntary (n = 111-114)
PANSS pos	18.1 (4.6)	21.7 (5.8)**	12.2 (4.9)	11.0 (4.1)	11.2 (4.2)	12.0 (5.9)
PANSS neg	13.6 (5.3)	15.7 (6.9)**	12.8 (5.8)	12.7 (5.6)	11.5 (5.0)	13.0 (6.7)
PANSS gen	32.6 (7.0)	34.7 (10.0)	26.7 (7.5)	24.5 (6.8)*	24.3 (6.9)	24.1 (7.3)
GAFs	32.3 (6.2)	26.7 (6.8)**	47.4 (12.6)	50.2 (13.5)	52.6 (14.3)	53.5 (17.7)
GAFF	36.1 (10.6)	27.5 (8.4)**	48.5 (12.6)	50.0 (12.2)	52.3 (14.3)	53.8 (17.5)

PANSS, Positive and Negative Syndrome Scale

* $P < 0.05$, ** $P < 0.001$

ment took place in both groups during the first 3 months of treatment, and especially in the involuntarily admitted group. During the 2 years of observation, we found no significant difference between the groups in adherence to treatment, and no difference between the groups on psychopathological measures at follow-up was revealed.

Involuntary commitment is sometimes used for other reasons than the patient's opposition to hospitalisation, e.g. to underline the severity of the condition, and how involuntary hospital admissions are practiced may vary within a country or from state to state. In this context, not only legal but also perceived coercion is of interest. Studies of perceived coercion show that a substantial number of voluntarily admitted patients feel highly coerced by verbal persuasion, threats or use of physical force. On the other hand, many involuntarily admitted patients report little or no coercion, even though the overall finding seems to be that the correlation between legal status and perceived coercion is high (19–21). To which extent high perceived coercion or involuntary status in any patient at admission is associated with less satisfaction and engagement with follow-up and poor outcome has not been clearly established through earlier studies (12, 19, 20, 22–25). Moreover, these studies have not dealt with first-episode psychosis.

In a recent study, it was found that patients who express low satisfaction with care within the first week of involuntary hospitalisation were more likely to be involuntarily readmitted during the following year than patients who were more satisfied at the same point of time. Patients who were less satisfied during the first week, were also less likely to feel that the hospitalisation was justified 1 year later (26). However, these patients were also not first-episode cases. Other studies have found that poor therapeutic adherence and severe psychopathology are important factors that drive violence in patients with schizophrenia, although some out-patients show aggressive behaviour despite being compliant with their medication (27).

More than half of our patients with first-episode psychosis were admitted involuntarily. Involuntary admission is generally more frequent in Norway than the other Nordic countries (28–31). However, the average level of perceived coercion among committed patients from Norwegian acute wards seems relatively low (31, 32). How involuntarily admitted patients are dealt with during the admission process seems to have major impact on their perceptions of coercion. Moreover, it does not seem to be coercion by itself that is decisive, but the way in which the patients are handled by the staff

(21, 24). Negative pressures such as threats and force, and process exclusion such as ignoring the patients' right to speak and taking their viewpoints into account, have been found to significantly predict perceived coercion, but legal status did not (28).

We found that relatively more women than men were admitted involuntarily, and that they were more agitated. Out of 223 patients Iversen et al. (28) found 38% women in the voluntarily vs. 49% in the involuntarily admitted group. Hence, more studies should look in detail for this phenomenon.

Involuntary admissions were relatively frequent in this representative study of first-episode psychosis. Patients were followed up closely for 2 years. In this context, legal admission status *per se* did not seem to influence treatment adherence or outcome.

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Declaration of interests

None

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