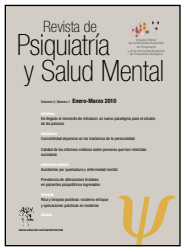
Rev Psiquiatr Salud Ment (Barc.) 2010;**3(2)**:50–54

Revista de Psiquiatría y Salud Mental

www.elsevier.es/saludmental



ORIGINAL ARTICLE

Evaluation of the Efficacy of Involuntary Outpatient Treatment in Reducing the Use of Mental Health Services in Hospital

Miguel Hernández-Viadel*, Carlos Cañete Nicolás, Juan Francisco Pérez Prieto, Guillem Lera Calatayud and Manuel Gómez Beneyto

Psychiatry Department, University Hospital Clinic, Valencia, Spain

Received on 21 September 2009; accepted on 1 March 2010

KEYWORDS
Involuntary outpatient treatment;
Efficacy

Abstract
Objective: To determine whether psychiatric patients in involuntary outpatient treatment (IOT) show reduced use of mental health services in hospital compared with a control group not subject to a court order.
Method: We compared a group of patients in IOT (n = 38) with a control group (n = 38), selected from involuntarily hospitalised patients during the same period. Patients in the control group had similar socio-demographic, clinical and psychiatric characteristics to the group with IOT. We analysed the number of emergencies, inpatient admissions and length of hospital stay during a follow-up period of six months after the beginning of the court order in the IOT group or after hospital discharge in the control group.
Results: No significant differences were found between the IOT and the control group in hospital use (number of emergencies, inpatient admissions and mean length of hospital stay).

PALABRAS CLAVE
Tratamiento ambulatorio involuntario;
Eficacia

Evaluación de la eficacia del tratamiento ambulatorio involuntario para reducir la atención hospitalaria

Resumen
Objetivo: Valorar si los pacientes psiquiátricos con tratamiento ambulatorio involuntario (TAI) reducen el uso de los servicios de salud mental en comparación con un grupo de control no sometido a esta medida judicial.
Método: Se comparó al grupo de pacientes con TAI (n = 38) con un grupo de control (n = 38) seleccionado del grupo de pacientes que fueron hospitalizados con carácter in-

*Corresponding author.
E-mail: mhv4@comv.es (M. Hernández-Viadel).

1888-9891/$ - see front matter

voluntario durante el mismo periodo. En el grupo control se ha incluido a pacientes con variables sociodemográficas, características clínicas e historia psiquiátrica similares a las del grupo con TAI. Se comparó el número de urgencias e ingresos y las estancias medias en el hospital durante un seguimiento de 6 meses tras el inicio de la medida judicial o el alta hospitalaria de los casos de control.
Resultados: No se encontraron diferencias significativas en la utilización de los servicios de salud mental (número de urgencias e ingresos y estancias medias) entre el grupo con TAI y el grupo de control.

Introduction

Involuntary outpatient treatment (IOT) is a form of non-voluntary treatment outside the hospital that has the object of ensuring therapeutic compliance of patients who suffer severe mental disease without awareness of their disease and in whom treatment abandonment means a high risk of relapse, with the appearance of disruptive and violent behaviour or repeated hospitalisation and frequent emergencies.[1]

IOT in patients with severe mental illness is common practice in countries such as the United States, Canada, United Kingdom, France, Germany, Australia, New Zealand and Israel. In general, there is no empowerment to forcibly administer medication, except in Australia, where this may be included. Canadian and Australian studies on IOT indicate a prevalence of use of 5-15 per 100,000 persons. In the United States, it is used in approximately 3/100,000 persons, in 9.8% of new admissions and in 7.1% of outpatients.[2]

Currently, Spanish Legislation only allows commitment to a psychiatric Centre, or the status of civil disability for persons whose lives are severely altered due to psychiatric disease which they are not aware of. In October 2004, the Spanish Association of Relatives of Patients with Mental Illness (FEAFES), presented a proposal before the Congress of Deputies to modify Article 763 of the Code of Civil Procedure, to make it legally possible to force a certain type of patient to receive outpatient treatment.[3]

In Valencia, District Court #13 has applied IOT since 2003, on the basis of the Oviedo Convention for the protection of human rights and dignity of the human being, developed by the Council of Europe in 1997. In Article 7 of this convention, on the protection of persons who have a mental disorder, it is recognised that the person who has a mental disorder of a serious nature may be subjected, without his or her consent, to "an intervention aimed at treating his or her mental disorder only where, without such treatment, serious harm is likely to result over his or her health".[4] The treatment plan, its control mechanisms and the health agency to be responsible for such is established by a court order. Then, at least every three months, the patient's evolution and follow-up, and decisions as to whether the patient is continue, modify or discontinue treatment must be reported to the Judge. The maximum duration of the measure is 18 months and it includes obligatory administration of medication outside the hospital.

Data on the Effectiveness of IOT

Two types of studies are found in medical literature:[5]

- Observational studies:[6-10] after introducing mandatory community treatment, there was a major decrease in emergencies, hospital admissions and the number of days hospital stay. However, these studies have marked methodological limitations that reduce confidence in their results (i.e. the small number of samples and the lack of a comparison group).
- Randomised studies: patients on IOT are compared with a control gorup,[11-16] with contradictory results. There are few studies of this type: Steadman et al[11] in New York did not find any significant differences in re-hospitalisation rates, arrests, quality of life, psychiatric symptoms, homeless with mental illnesses, or other results between the IOT group and the control group (those who received intensive services but without a court order). However, the study limitations may have affected the results (small sample, non-equivalent groups compared, lack of compliance of court order). Another study, carried out by Swartz et al[17-21] at the University of Duke, shows that an IOT order followed for 180 or more days, combined with intensive mental health services, can increase adherence to treatment and reduce the risk of negative results. In these studies the results obtained were not better than those seen in studies with assertive treatment alone. Their results indicated that patients with psychotic disorders and a poor prognosis would benefit from intensive mental services and mandatory treatment lasting 180 days or more.

Objective

The objective of our study is to provide information on the efficacy of this legal measure on decreasing the number emergencies, hospital admissions and hospital stays.

As is the case with other studies that examined the effectiveness of IOT, the outcome measure is based on the use of hospital services (emergency services, hospital admissions and hospital stay). By applying this legal measure, and if IOT treatment adherence increases, and therefore prevents relapses, the number of emergencies and the mean stay during hospital admissions are expected to decrease.

Method

This a retrospective study of cases and controls, in which we compare a group of patients under IOT with a control group. The group of patients under IOT corresponds to inhabitants of the city of Valencia included in IOT up to the time of the study (October 2005).

The control group is a sample of patient population that has had at least one involuntary admission in the Acute Unit of the Psychiatric Ward of the Clinical Hospital of Valencia during the period between November 2003, (date of the first IOT patient), and October 2005 when this study began. We considered the admission index for this period. If there was more than one hospital admission during that time, the first of these was considered for the admission index.

The control group was made up of patients with sociodemographic variables, clinical characteristics, and psychiatric histories similar to those of the IOT group. The sociodemographic variables included age, sex, and urban residence (living in the city of Valencia). The clinical characteristics are diagnosis and chronic evolution, that is, at least two years of disease evolution. In the psychiatric history we included the number of emergencie and hospital admissions in the six months prior to index determination, similar to those of the IOT group.

In this study, we compared the number of emergencies and mean hospital admissions between the IOT group and the control group, during a six-month follow-up after the IOT group had received a court order or the control group had been discharged from hospital.

For each patient we collected data on age, sex, psychiatric diagnosis according to DSM-IV criteria, reasons for IOT or hospital admission, number of admissions, number of psychiatric emergencies and mean duration of hospital stays.

Ethical Aspects and Funding

The study was designed and carried out according to the Declaration of Helsinki and the laws on ethics related to medical practice. The study was carried out independently of any institutional influence and did not receive external funding.

Results

The mean age of the IOT group of patients was 41.5 ± 11.6 and 41.4 ± 10.2 in the control group (p=0.9). By age, both groups are formed by 38 patients, 26 men and 12 women.

Patients' diagnoses can be seen in table 1: more than two thirds of the patients were diagnosed with schizophrenia.

The most frequent reasons for involuntary hospital admissions (table 2) were therapeutic non-compliance in the IOT group and positive symptoms in the control group, according to the clinical judgment of the psychiatrist who was in charge of admissions.

At the moment of the court order coming into force, five of the patients under IOT had never previously been admitted to hospital. The reason for applying IOT in these five cases was aggressive conduct and zero awareness of disease. The court order was requested by the relatives themselves when the patient refused to attend the mental health services. Two patients had been diagnosed with schizophrenia and the other three, with delusional disorder. Given the health resources that are currently available, the court order was the only way that these patients could be introduced into the mental health network. During six months of study follow-up, only one of these five patients was admitted to hospital.

There were no significant differences between the IOT and control group for the number of emergencies and hospital admissions and the mean hospital stays during the six months prior to the beginning of IOT or admission index (table 3). This means that we can consider the groups as being 'similar' with regards their use of the health services.

After six months of IOT or hospital discharge in the control group, the same variables were measured once more (emergencies, hospital admissions, mean hospital stay) and the results can be seen in table 4. As can be observed, the variables have decreased significantly in both groups when comparing results data with those of the previous six months (table 3). However, no statistically significant differences were seen when comparing both study groups after six moths of follow-up (table 4).

Table 1 Diagnosis of Axis I (DSM-IV)

Diagnosis (DSM-IV)	IOT group, n (%)	Control group, n (%)
Schizophrenia	26 (68)	27 (71)
Bipolar disorder	5 (13)	5 (13)
Delusional disorder	5 (13)	4 (11)
Schizoaffective disorder	1 (3)	2 (5)
Substance-induced psychotic disorder	1 (3)	0
Total	38 (100)	38 (100)

Table 2 Main Reason for Hospital Admission

Reason	IOT group, n (%)	Control group, n (%)
Aggressive behaviour	8 (25)	8 (21)
Therapeutic non-compliance	22 (68.7)	7 (18.4)
Positive symptoms	0	16 (42.1)
Attempted suicide	0	4 (10.5)
Threats of self-aggressiveness/ aggressiveness towards others	2 (6.2)	3 (7.9)
Total	32 (100)	38 (100)

$\chi^2 = 28$; $p<0.001$.

Table 3 Use of Hospital Mental Health Services During the Six Months after the Beginning of IOT or Admission Index

	IOT group, n (mode)	IOT group, n (mode)
Emergencies	1.86 (2)	2 (2)
Number of admissions	1.1 (1)	1.23 (1)
Mean hospital stay in acute unit (days)	26	25.7
Patients admitted, n	33	38
Mean hospital stay of those admitted (days)	29.9	25.7

Table 4 Use of Hospital Mental Health Services During the Six Months after the Beginning of IOT or Admission Index

	IOT group, n (mode)	Control group, n (mode)
Emergencies	0.47 (0)	0.63 (1)
Admissions	0.23 (0)	0.15 (0)
Mean hospital stay (days)	2.52	2.81
Patients admitted, n	8	5
Mean hospital stay of those admitted (days)	12	21.4

Discussion

In our study we saw that, as is described in medical literature, IOT was applied more frequently to people with schizophrenia (70%), with aggressive or violent conduct, zero awareness of disease and therapeutic non-compliance.[17] Court intervention was only necessary in the case of one patient to enforce outpatient treatment during the six months of IOT follow-up.

Swartz et al[12-16] carried out a randomised clinical trial in which both the patients under the court order and the control group underwent outpatient follow-up with "case management". They point out that adherence to treatment can improve and negative results reduce (relapses, violent conduct, victimisation or arrests) when an IOT court order for more than 180 days is combined with intensive mental health services.

However, other authors (Steadman et al[11] and Kisely et al,[2,18] Pollack et al[19] and Preston et al[20]) found no significant differences between the control group and the IOT group with regards the use of health services, i.e. number of hospital admissions, mean hospital stay and number of emergencies.

In our study the number of emergencies, admissions and duration of hospital stays had reduced for IOT patients during the six months after the court order was given. However, after adjusting for diagnoses, age, sex and previous use of hospital services, this improvement was not significantly greater than that obtained in the control group without IOT.

The results of this study cause doubts as to the effectiveness of IOT as a mandatory community treatment order. If the efficacy is defined as a reduction in the use of hospital services (number of emergencies, hospital admissions or mean hospital stays), our results indicated that this legal measure is no more effective than non-mandatory outpatient treatment.

Nevertheless, the efficacy of IOT can be estimated using other outcome measures, such as patient satisfaction, adherence to treatment during the application of the order or the evolution of the patient after the use of the court order. With regards patient satisfaction, in a prior study,[21] we found that 80-90%of the psychiatrists and the relatives interviewed consider that IOT was a beneficial measure for patient treatment. Even 54% of patients under IOT stated that this was a beneficial measure for their treatment.

When considering adherence to treatment, we found that, for five of the 38 patients with IOT (13%), the legal measure was their relatives' last resort to achieve adherence to outpatient treatment. It is possible that with other types of interventions, such as assertive community treatment, some of these patients would continue outpatient treatment without legal intervention. However, authors such as O'Reilly[22] found that about 10% of the patients with assertive community treatment follow the treatment plan only as long as they are obliged to by IOT.

The study limitations included the small sample size and the very limitations belonging to the case and control design. These difficulties could have been avoided using a randomised clinical trial design, but from our point of view the ethical obstacles did not allow this.

References

1. Hernández M., Pérez F.J., Cañete C., Lera G., Roche T. Tratamiento ambulatorio involuntario (TAI) para personas con trastorno mental grave. Psiq Biol. 2006;13:183-7.
2. Kisely S., Campbell L.A., Preston N. Compulsory community and involuntary outpatient for people with severe mental disorders. Cochrane Review. Oxford: Cochrane Plus Library. 2005. (4).
3. Comisión de Justicia. Proposición de Ley de Modificación LEC para regular los tratamientos no voluntarios de las personas con trastornos psíquicos. Diario de Sesiones del Congreso de los Diputados, número 206; Sesión n.o 11, 1-56; 1 de marzo de 2005.
4. Convenio de Oviedo, para la protección de los Derechos Humanos y la Dignidad del ser humano con respecto a las aplicaciones de la biología y la medicina. Convenio relativo a los Derechos Humanos y la Biomedicina. Available online: www.san.gva.es/ hguv/ descargas/ quiosco/ convenio_oviedo.pdf
5. Ridgely M.S., Borum R., Petrila J. The effectiveness of involuntary outpatient treatment: Empirical evidence and the experience of eight States 2001. Available online: www.rand.org/publications/MR/MR1340
6. Fernandez G., Nygard S. Impact of involuntary outpatient commitment on the revolving-door syndrome in North Carolina. Hosp Community Psychiatry. 1990;41:1001-4.

7. Geller J., Grudzinskas A. The efficacy of involuntary outpatient treatment in Massachusetts. Admin Policy Ment Health. 1998;25:271-85.
8. Hiday V., Scheid-Cook T. A follow-up of chronic patients committed to outpatient treatment. Hosp Community Psychiatry. 1989;40:52-9.
9. Munetz M.R., Grande T., Kleist J., Peterson GA. The effectiveness of outpatient civil commitment. Psychiatr Serv. 1996;47:1251-3.
10. Zanni G., DeVeau L. Inpatient stays before and after outpatient commitment. Hosp Community Psychiatr. 1986;37:941-2.
11. Steadman H.J., Gounis K., Dennis D., Hopper K., Roche B., Swartz M., et-al. Assessing the New York City Involuntary Outpatient Commitment Pilot Program. Psychiatr Serv. 2001; 52:330-6.
12. Swartz M.S., Swanson J.W., Wagner H.R., Burns B.J., Hiday V.A., Borum R. Can involuntary outpatient commitment reduce hospital recidivism? Findings from a randomized trial with severely mentally ill individuals. Am J Psychiatry. 1999;156:1968-75.
13. Swartz M.S., Swanson J.W., Hiday V.A., Wagner H.R., Burns B.J., Borum R. A randomized controlled trial of outpatient commitment in North Carolina. Psychiatr Serv. 2001;52:325-9.
14. Swanson J.W., Swartz M.S., Borum R., Hiday .V.A., Wagner H.R., Burns B.J. Involuntary out-patient commitment and reduction of violent behaviour in persons with severe mental illness. Br J Psychiatry. 2000;176:324-31.
15. Swanson J.W., Borum R., Swartz M.S., Hiday V.A., Wagner H.R., Burns B.J. Can involuntary outpatient commitment reduce arrests among persons with severe mental illness? Criminal Justice and Behavior. 2001;28:156-89.
16. Swartz M.S., Swanson J.W. Involuntary outpatient commitment, community treatment orders, and assisted outpatient treatment: What's in the data? Can J Psychiatry. 2004;49: 585-91.
17. Hernández M., Cañete C., Lera G., Pérez F.J., Roche T. Tratamiento ambulatorio involuntario para personas con trastorno mental severo. Resultados de un estudio en la ciudad de Valencia. Psiq Biol. 2007;14:7-12.
18. Kisely S., Cambell L.A., Preston N.J., Xiao J. Can epidemiological studies assist in the evaluation of community treatment orders? —The experience of Western Australia and Nova Scotia. Int J Law Psychiatry. 2006;29:507-15.
19. Pollack D.A., Mc Farland B.H., Mahler J.M., Kovas A.E. Outcomes of patients in a low-intensity, short-duration involuntary outpatient commitment program. Psychiatr Serv. 2005;56: 863-6.
20. Preston N.J., Kisely S., Xiao J. Assessing the outcome of compulsory psychiatric treatment in the community: epidemiological study in Western Australia. Psychol Med. 2005;35:1357-67.
21. Hernández-Viadel M., Lera Calatayud G., Cañete Nicolás C., Pérez Prieto J.F. Tratamiento ambulatorio involuntario: opinión de las personas implicadas. Arch Psiquiatría. 2007;70:65-74.
22. O'Reilly R.L. Community treatment orders: an essential therapeutic tool in the face of continuing deinstitutionalization. Can J Psychiatry. 2006;51:686-8.