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The Involuntary-To-Voluntary Hospitalization Transition and the Risk of Psychiatric Decompensation: A Retrospective Cohort Study

A Transição de Internamento Involuntário para Voluntário e o Risco de Descompensação Psiquiátrica: Um Estudo de Coorte Retrospetivo

Margarida CASTRO [1], Joana TAVARES COELHO [2,3], Ana Rita FERREIRA [3,4], Henrique SALGADO [2,3]
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ABSTRACT

Introduction: Involuntary hospitalization of a patient with a mental disorder is broadly defined as the admission to an inpatient unit without the patient's consent. Literature suggests that involuntary hospitalizations are associated with low levels of treatment satisfaction, avoidance of mental health care, and an increased risk of emergency involuntary re-hospitalization. Despite being a lifesaving treatment, involuntary admissions can also be stigmatizing, undermine the long-term therapeutic relationship and reduce adherence to care. In this context, little research has been conducted to evaluate how shifting a patient's hospitalization from involuntary to voluntary affects health outcomes, such as psychiatric decompensation and healthcare use. The main aim of this study was to identify and assess the frequency of readmissions within one year among patients who transitioned to voluntary treatment, compared with those who remained involuntarily treated.

Methods: An observational retrospective study was conducted using secondary data from medical records of adult inpatients involuntarily admitted to the inpatient psychiatry department of Unidade Local de Saúde São João. All involuntary hospitalizations occurring between January 1st and December 31st, 2022, were classified into two distinct groups: patients who were initially admitted involuntarily and subsequently converted to voluntary hospitalization during their stay or patients who remained under involuntary hospitalization until discharge. Data registered in medical records within one year after the index hospitalization was collected and assessed (whether structured data or free text entries). Descriptive and comparative analyses were performed.

Results: A total of 120 patients were included. More patients converted to voluntary hospitalization (60.8%) than remained involuntarily hospitalized (39.2%). In comparison to voluntary inpatients, involuntary inpatients had significantly higher readmission rates within one year (36.2% *vs* 15.3%, $p = 0.009$) and were more often readmitted under involuntary status (88.2% *vs* 45.5%, $p = 0.030$).

Conclusion: Involuntary hospitalization was associated with worse outcomes within one year, underscoring the need for its use to be proportional to the risk and subject to periodic review. Conversion to voluntary hospitalization is reasonable, respects patient autonomy and, provided that appropriate treatment is maintained, does not worsen psychiatric decompensation.

Keywords: Hospitalization; Inpatients; Involuntary Treatment; Mental Disorders; Patient Compliance; Portugal; Psychiatry; Readmission; Risk Factors

RESUMO

Introdução: O internamento involuntário de um doente com doença mental é definido como a admissão numa unidade de internamento sem o seu consentimento. A literatura sugere que o internamento involuntário está associado a baixos níveis de satisfação com o tratamento, ao evitamento dos cuidados de saúde mental e um risco aumentado de reinternamentos involuntários urgentes. Apesar de ser um tratamento que pode salvar vidas, o internamento involuntário também pode ser estigmatizante, prejudicar a relação terapêutica a longo prazo e reduzir a adesão ao tratamento. Nesse sentido, há pouca investigação científica sobre o impacto da mudança de internamento involuntário para voluntário na saúde do doente, como a descompensação psiquiátrica e utilização de cuidados de saúde. O principal objetivo deste estudo foi identificar e avaliar a frequência de readmissões, a um ano, de doentes que transitaram para tratamento voluntário, em comparação com aqueles que permaneceram em tratamento involuntário.

Métodos: Foi realizado um estudo observacional retrospectivo utilizando dados clínicos dos doentes internados involuntariamente em Psiquiatria na Unidade Local de Saúde São João. Todos os internamentos involuntários decorridos entre 1 de janeiro e 31 de dezembro de 2022 foram categorizados em dois grupos: doentes inicialmente admitidos involuntariamente, posteriormente convertidos em internamento voluntário e doentes que permaneceram em internamento involuntário até à data de alta. Os dados registados nos processos clínicos no período de um ano após o internamento inicial foram recolhidos e analisados (tanto dados estruturados como entradas de texto livre). Foram realizadas análises descritivas e comparativas.

Resultados: No total, foram incluídos 120 doentes. Um maior número de doentes passou para internamento voluntário (60,8%) comparativamente ao número de doentes que permaneceu em internamento involuntário (39,2%). Comparativamente aos doentes em internamento voluntário, os doentes que permaneceram em internamento involuntário apresentaram um número de reinternamentos ao fim de um ano significativamente superior (36,2% *vs* 15,3%, $p = 0,009$) e apresentaram maior número de reinternamentos involuntários (88,2% *vs* 45,5%, $p = 0,030$).

Conclusão: O internamento involuntário mostrou estar associado a piores resultados a um ano, sublinhando que a sua utilização deve ser proporcional ao risco apresentado e sujeita a reavaliação regular. A transição para internamento voluntário é uma abordagem razoável, respeita a autonomia do paciente e, desde que seja assegurado o tratamento adequado, não agrava descompensação psiquiátrica.

Palavras-chave: Cooperação do Doente; Doentes Internados; Factores de Risco; Hospitalização; Perturbações Mentais; Portugal; Psiquiatria; Readmissão; Tratamento Involuntário

1. Faculdade de Medicina. Universidade do Porto. Porto. Portugal.
2. Psychiatry Service. Unidade Local de Saúde São João. Porto. Portugal.
3. Department of Clinical Neurosciences and Mental Health. Faculdade de Medicina. Universidade do Porto. Porto. Portugal.
4. RISE-Health. Faculdade de Medicina. Universidade do Porto. Porto. Portugal.
✉ **Autor correspondente:** Margarida Castro. up201806056@edu.med.up.pt
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KEY MESSAGES

- Involuntary hospitalizations can be stigmatizing, undermine the long-term therapeutic relationship and reduce adherence to care, and therefore should only be used when proportional to the risk posed.
- To the best of our knowledge, this is the first study to compare outcomes in patients with mental illness who were discharged under voluntary status following an initial involuntary hospitalization, with the aim of assessing the prognostic value of this change in legal status.
- We found that patients who converted to voluntary hospitalization experienced fewer readmissions within one year compared to patients who remained under involuntary hospitalization, and those readmissions were less likely to occur under involuntary status. In contrast, involuntary inpatients had longer lengths of stay during the index hospitalization and a greater history of previous admissions. Additionally, they were more likely to be subjected to coercive measures, including the administration of injectable medication without consent, both during previous involuntary outpatient treatment and during the index hospitalization.
- Since this is a retrospective study, the quality of the data presented is dependent on the accuracy and completeness of the information registered by the clinicians. Despite the existence of some limitations, this study was able to describe and detail the clinical outcomes and sociodemographic trends of these patients.

INTRODUCTION

Involuntary hospitalization of a patient with a mental disorder is defined as the admission to an inpatient unit without the patient's consent.[1] It consists of a legal procedure to hospitalize individuals with a serious mental illness, and it is a common practice around the world. However, it should only be applied in exceptional circumstances, when it is absolutely necessary to guide a person who is either unaware of or unwilling to address their condition. Because of the nature of mental illness, such measures are primarily intended to mitigate the risk of harm posed by the patients' behavior, both toward themselves (e.g., suicide, self-injury, or aggression) and towards the community.[2]

European countries have diverse regulations governing involuntary hospitalization in mental health facilities. The length of the hospitalization, the reasons for admission and the necessity of treatment can differ. Some countries, such as Denmark, France, Portugal, and Spain, do not set a fixed time limit for involuntary hospitalization. In contrast, Italy and the United Kingdom establish maximum durations. Most European countries require a diagnosis of a mental disorder before involuntary admission.[1]

In Portugal, the Mental Health Law No. 35/2023 of July 21st, 2023, defines involuntary hospitalization as the hospitalization of a person with a mental illness, ordered by a court. This law stipulates that involuntary hospitalization should only be used as a measure of last resort, used when outpatient treatment is not possible or sufficient and should cease as soon as the grounds for such commitment no longer exist. Involuntary hospitalization can only be ordered if it is proportional to the risk posed and the legal interests involved. It must be periodically reviewed by a judge and carried out in appropriate mental health units with medical and psychological support. Additionally, individuals involuntarily admitted have the right to visits, communication, and access to free activities.[3]

There is still considerable debate regarding the ethical dimension of involuntary hospitalization due to the restriction of personal liberty involved in providing adequate treatment under medical supervision.[4] For example, a study conducted in Norway introduced a 24-hour re-evaluation period for patients referred for involuntary hospitalization. This approach appeared to provide a meaningful opportunity to reduce unnecessary admissions while safeguarding the patient's right to opt for voluntary hospitalization.[2]

The literature suggests that severe psychiatric disorders, such as schizophrenia, coupled with aggressive behavior and treatment non-adherence, are significant predictors of involuntary hospitalization.[5] Moreover, some studies suggest that organic, psychotic, and bipolar disorders are associated with a higher rate of involuntary admissions. Additionally, patients discharged involuntarily often experience a higher incidence of crisis situations, receive fewer pharmacologic intervention and therapy, and exhibit overall poorer prognostic outcomes.[6] The prognosis following discharge from involuntary hospitalization is also associated with an increased risk of readmission, particularly among patients with schizophrenia.[7] However, to date, limited research has been conducted to assess the clinical decompensation and prognosis associated with transitioning patients from involuntary hospitalization to voluntary treatment.[8]

In this context, studies comparing the risks associated with involuntary versus voluntary admission found that involuntary patients had equal or longer lengths of stay, higher rates of readmission, and an increased risk of subsequent involuntary readmissions. While no increase in overall mortality was observed among involuntary patients, they

did exhibit higher suicide rates compared to those admitted voluntarily. In addition, involuntarily admitted patients were found to have lower levels of social functioning, both at admission and at discharge, were less satisfied with treatment and more frequently perceived their hospitalization as unjustified. No significant differences were observed in levels of psychopathology or treatment compliance.[9,10]

Involuntary hospitalization is intended to improve the quality of medical treatment for patients with mental disorders and to mitigate the risk posed by those who discontinue or receive insufficient psychiatric care, as a proportion of criminal acts are committed by psychiatric patients.[11] However, despite being a potentially lifesaving treatment, involuntary admissions can also be stigmatizing, undermine the long-term therapeutic relationship, and reduce adherence to treatment.

With this retrospective cohort study, we aimed to identify and assess the frequency of readmission, within one year, among patients who transitioned to voluntary treatment, compared with those who remained involuntarily treated; to determine the time to readmission, legal status and length of stay of readmission of the cohort; and to assess the occurrence of in-hospital mortality or suicide.

We expect to clarify how transitioning involuntarily hospitalized patients to voluntary status affects psychiatric decompensation. Through this comparative analysis, we hope to provide evidence supporting the prioritization of voluntary treatment whenever feasible.

METHODS

Study design

An observational single-site retrospective cohort study was conducted using administrative and clinical data of patients who were involuntarily admitted to the inpatient psychiatry department of Unidade Local de Saúde São João (ULSSJ), a university hospital located in northern Portugal that is part of the Portuguese National Health Service (NHS). Data analysis, reporting, and manuscript formatting complied with the REporting of studies Conducted using Observational Routinely-collected Data (RECORD) statement recommendations.[12]

Setting

The study encompassed all cases of involuntary psychiatric hospitalization that occurred within ULSSJ between January 1st and December 31st, 2022.

Participants and study duration

All hospitalization episodes of adult patients (≥ 18 years old) involuntarily admitted to the inpatient psychiatry department of ULSSJ between January 1st, 2022, and December 31st, 2022, were considered for inclusion, regardless of diagnosis and sex. No other criteria were established.

Hospitalization episodes were assigned to individual patients, who were the unit of analysis of the present study. Patients were then assigned to one of two groups: patients who were initially admitted involuntarily and subsequently converted to voluntary hospitalization during their stay, or patients who remained under involuntary hospitalization until discharge, hereafter referred to as voluntary or involuntary inpatients, respectively. To assess the primary outcome, defined as the frequency of readmission within one year, data registered in medical records within one year following the index hospitalization were extracted and analyzed (whether structured data or free-text entries).

Data collection and management

De-identified data were extracted from patients' clinical records. For each patient, demographic characteristics and administrative data were collected. To ensure data security, information was stored in a database on an encrypted USB drive. All identifiable information, including patient names and process numbers, was removed upon completion, warranting data anonymity. Information was used exclusively for this study, with access restricted to members of the research team and was deleted upon completion.

Variables and outcomes

Each patient's collected data included socio-demographic characteristics and administrative data such as admission date, age at admission, sex, marital status (single, married, divorced/separated or widowed), occupation (employed, unemployed, retired or student), and migration status (migrant or non-migrant). Clinical data was also collected, including the main diagnosis and other comorbid conditions such as cardiovascular comorbidities. Diagnoses were classified according to the International Classification of Diseases 10 version (ICD-10).[13] Psychiatric diagnoses were categorized into eleven diagnostic groups, to obtain more representative and larger patient groups, as follows: unspecified dementia (F03), substance use disorders (F12 - F19), schizophrenia spectrum disorders (F20), delusional disorders (F22), acute and transient psychotic disorders (F23), schizoaffective disorders (F25), unspecified psychosis (F29), mania and bipolar disorder (F30 - F31), depressive disorder (F32 - F33), personality disorders (F60), and others (F09, F44, F79). We classified cardiovascular comorbidities based on the presence of cardiovascular risk factors such as smoking, diabetes, hypertension, obesity, as well as the presence of cardiovascular diseases, including myocardial infarction, cerebrovascular accident, acute coronary syndrome or stable coronary disease.

Data on previous admissions, their number and legal status were also extracted, as well as information on

involuntary ambulatory treatment. Additionally, we collected information on the index hospitalization, such as the length of stay (LoS), treatment administered (oral or injectable), specific injectable medication administered, and discharge destination.

Regarding the outcome measures, these included the number of readmissions within one year, time to readmission, legal status and LoS of readmission. In-hospital mortality and suicide outcomes were also extracted and analyzed.

Statistical analysis

The data was organized into a Microsoft® Excel® spreadsheet and was further exported to IBM® SPSS Statistics version 30.0 to perform the statistical analysis.

Categorical variables were described using absolute values and relative frequencies. As for quantitative variables, including age, index hospitalization LoS, number of previous admissions and readmission LoS, these were described using median and interquartile range (IQR), as normality was not observed, as assessed by Kolmogorov-Smirnov and Shapiro-Wilk tests (p-values < 0.05).

Comparative analyses of sociodemographic and clinical variables, as well as of prognosis outcomes, were performed between the two groups. Quantitative variables were recoded and categorized as appropriate. The chi-square test or Fisher's exact test were used, depending on the variables. P-values of < 0.05 were considered to be statistically significant (two-tailed).

Additional analyses were conducted among voluntary and involuntary inpatients, focusing on potentially more severe diagnoses with a higher risk of readmission, defined as the F20 - F31 subgroup following previous studies.[5]

In cases of missing data due to incomplete clinical registries, the missing values were explicitly indicated for each variable.

Ethical considerations

As this study involved a retrospective review of existing clinical data and posed no risk to participants, we requested a waiver of informed consent from the ethics committee. The study was submitted to and authorized by the Ethics Committee of ULSSJ (Authorization no. 373/2024).

Data sharing

The technical appendix, dataset creation plan/protocol, and statistical code are available from the corresponding author upon reasonable request.

RESULTS

Participants

Between January 1st, 2022, and December 31st, 2022, a total of 144 involuntary hospitalizations occurred, corresponding to 120 patients admitted to the inpatient psychiatry department.

There were more patients that converted to voluntary hospitalization (60.8%, n = 73) than patients who remained under involuntary hospitalization (39.2%, n = 47). The median age of the cohort was 40.00 years (IQR 30.00; 60.00 years). There was predominance of male patients (64.2% *vs* 35.8%). Patients were mostly single (58.0%, n = 69), followed by divorced/separated (20.2%, n = 24), married (17.6%, n = 21), and widowed (4.2%, n = 5). The majority were unemployed (40.2%, n = 47), followed by those who were retired (30.8%, n = 36), employed (25.6%, n = 30) and finally students (3.4%, n = 4). Most patients were non-migrants (85.8%, n = 103), and 14.2% (n = 17) were migrants. Among the primary diagnoses, the most frequently recorded were: F29 (26.7%, n = 32), F20 and F30 - F31 (both with 16.7%, n = 20) and F12 - F19 (13.3%, n = 16). Cardiovascular comorbidities were coded in 54 patients (45.0%). Previous admissions were registered for 73 patients (60.8%), with a median of 3.00 previous admissions (IQR 1.00; 7.00). Moreover, 48 of these patients (69.6%) presented previous involuntary admissions. Of all the patients admitted, 20 (16.7%) were in involuntary ambulatory treatment. The median LoS for the index hospitalization was 16.50 days (IQR 12.00; 22.00). During hospitalization, 58 patients (48.3%) received injectable treatment, including paliperidone (39.7%, n = 23), haloperidol (36.2%, n = 21), aripiprazole (17.2%, n = 10) and risperidone (6.9%, n = 4). The most frequent destination after discharge was the outpatient clinic (77.5%, n = 93), followed by the day hospital (15.0%, n = 18), and external facilities (7.5%, n = 9), with the latter including another hospital or healthcare unit outside ULSSJ (Table 1).

Compared to involuntary inpatients, voluntary inpatients were predominantly aged 60 - 69 (27.4% *vs* 8.5%, p = 0.012), married (25.0% *vs* 6.4%, p = 0.009), employed (34.3% *vs* 12.8%, p = 0.009), and significantly more likely to have an F30 - F31 diagnosis (23.3% *vs* 6.4%, p = 0.016). On the other hand, involuntary inpatients were mostly single (72.3% *vs* 48.6%, p = 0.009), unemployed (53.2% *vs* 31.4%, p = 0.016), more likely to have an F20 diagnosis (29.8% *vs* 8.2%, p = 0.002) and to be referred to the day hospital (23.4% *vs* 9.6%, p = 0.036).

Additionally, involuntary inpatients had previous admissions more frequently (83.0% *vs* 46.6%, p < 0.001), as well as a prior involuntary admission (86.8% *vs* 48.4%, p < 0.001), were more often in involuntary ambulatory treatment (36.2% *vs* 4.1%, p < 0.001), presented higher LoS (> 20 days) for the index hospitalization (42.6% *vs* 23.3%, p = 0.026) and were more often administered injectable treatments (80.9% *vs* 27.4%, p < 0.001) (Table 2).

Table 1 – Sociodemographic and clinical characteristics of involuntary hospitalizations (section 1 of 2)

Variable	Category	n	%	Valid %
Hospitalization status at discharge	Voluntary	73	60.8%	60.8%
	Involuntary	47	39.2%	39.2%
	Total	120	100.0%	100.0%
Age groups	Median (IQR)	44.00 (30.00 - 60.00)		
	19 - 29	29	24.2%	24.2%
	30 - 39	21	17.5%	17.5%
	40 - 49	23	19.2%	19.2%
	50 - 59	15	12.5%	12.5%
	60 - 69	24	20.0%	20.0%
	70 - 79	8	6.7%	6.7%
	Total	120	100.0%	100.0%
Sex	Female	43	35.8%	35.8%
	Male	77	64.2%	64.2%
	Total	120	100.0%	100.0%
Marital status	Single	69	57.5%	58.0%
	Married	21	17.5%	17.6%
	Divorced/separated	24	20.0%	20.2%
	Widowed	5	4.2%	4.2%
	Total (Valid)	119	99.2%	100.0%
	Missing	1	0.8%	
	Total	120	100.0%	
Occupation	Employed	30	25.0%	25.6%
	Unemployed	47	39.2%	40.2%
	Retired	36	30.0%	30.8%
	Student	4	3.3%	3.4%
	Total (Valid)	117	97.5%	100.0%
	Missing	3	2.5%	
	Total	120	100.0%	
Migration status	Migrant	17	14.2%	14.2%
	Non-migrant	103	85.8%	85.8%
	Total	120	100.0%	100.0%
Main diagnosis	F03	5	4.2%	4.2%
	F12 - F19	16	13.3%	13.3%
	F20	20	16.7%	16.7%
	F22	8	6.7%	6.7%
	F23	1	0.8%	0.8%
	F25	5	4.2%	4.2%
	F29	32	26.7%	26.7%
	F30 - F31	20	16.7%	16.7%
	F32 - F33	6	5.0%	5.0%
	F60	3	2.5%	2.5%
	F09, F44, F79	4	3.3%	3.3%
	Total	120	100.0%	100.0%
Cardiovascular comorbidities	Yes	54	45.0%	45.0%
	No	66	55.0%	55.0%
	Total	120	100.0%	100.0%
Previous admissions	Yes	73	60.8%	60.8%
	No	47	39.2%	39.2%
	Total	120	100.0%	100.0%

Abbreviations: F03 (unspecified dementia); F12 - F19 (substance use disorders); F20 (schizophrenia spectrum disorders); F22 (delusional disorders); F23 (acute and transient psychotic disorders); F25 (schizoaffective disorders); F29 (unspecified psychosis); F30 - F31 (mania and bipolar disorder); F32 - F33 (depressive disorder); F60 (personality disorders); F09, F44, F79 (others).

Table 1 – Sociodemographic and clinical characteristics of involuntary hospitalizations (section 2 of 2)

Variable	Category	n	%	Valid %
Number of previous admissions	Median (IQR)	3.00 (1.00 - 7.00)		
	1 - 5	51	69.9%	69.9%
	6 - 10	12	16.4%	16.4%
	11 - 15	5	6.8%	6.8%
	16 - 20	2	2.7%	2.7%
	21 - 37	3	4.1%	4.1%
	Total	73	100.0%	100.0%
Previous involuntary admission	Yes	48	65.8%	69.6%
	No	21	28.8%	30.4%
	Total (Valid)	69	94.5%	100.0%
	Missing	4	5.5%	
	Total	73	100.0%	
Involuntary ambulatory treatment	Yes	20	16.7%	16.7%
	No	100	83.3%	83.3%
	Total	120	100.0%	100.0%
Length of stay	Median (IQR)	16.50 (12.00 - 22.00)		
	≤ 20 days	83	69.2%	69.2%
	> 20 days	37	30.8%	30.8%
	Total	120	100.0%	100.0%
Injectable treatment	Yes	58	48.3%	48.3%
	No	62	51.7%	51.7%
	Total	120	100.0%	100.0%
Which injectable treatment	Haloperidol	21	36.2%	36.2%
	Risperidone	4	6.9%	6.9%
	Paliperidone	23	39.7%	39.7%
	Aripiprazole	10	17.2%	17.2%
	Total	58	100.0%	100.0%
Orientation after discharge	Outpatient clinic	93	77.5%	77.5%
	Day hospital	18	15.0%	15.0%
	External facilities	9	7.5%	7.5%
	Total	120	100.0%	100.0%
Readmission within one year	Yes	28	23.3%	23.5%
	No	91	75.8%	76.5%
	Total (Valid)	119	99.2%	100.0%
	Omitted	1	0.8%	
	Total	120	100.0%	
Legal status of readmission	Voluntary	8	28.6%	28.6%
	Involuntary	20	71.4%	71.4%
	Total	28	100.0%	100.0%
Time to readmission	≤ 3 months	16	57.1%	57.1%
	> 3 months	12	42.9%	42.9%
	Total	28	100.0%	100.0%
Length of stay of readmission	Median (IQR)	17.50 (14.00 - 28.75)		
	≤ 20 days	17	60.7%	60.7%
	> 20 days	11	39.3%	39.3%
	Total	28	100.0%	100.0%
In-hospital mortality	Yes	0	0.0%	0.0%
	No	120	100.0%	100.0%
	Total	120	100.0%	100.0%
Suicide	Yes	0	0.0%	0.0%
	No	120	100.0%	100.0%
	Total	120	100.0%	100.0%

Abbreviations: F03 (unspecified dementia); F12 - F19 (substance use disorders); F20 (schizophrenia spectrum disorders); F22 (delusional disorders); F23 (acute and transient psychotic disorders); F25 (schizoaffective disorders); F29 (unspecified psychosis); F30 - F31 (mania and bipolar disorder); F32 - F33 (depressive disorder); F60 (personality disorders); F09, F44, F79 (others).

No statistically significant differences were observed between involuntary and voluntary inpatients regarding sex, migration status, and cardiovascular comorbidities.

Outcome data

Readmission within one year occurred in 28 patients (23.5% voluntary inpatients *vs* 76.5% involuntary inpatients). Among those readmitted within one year, 20 patients (71.4%) were involuntarily admitted and eight (28.6%) were voluntarily admitted. Also, 16 (57.1%) patients were readmitted in three months or less after the first discharge. The median LoS of readmissions was 17.50 days (IQR 14.00; 28.75). There were no cases of in-hospital mortality or suicide (Table 1).

Involuntary inpatients were readmitted more frequently in comparison to voluntary inpatients (36.2% *vs* 15.3% respectively, $p = 0.009$). Additionally, they were more often readmitted under involuntary status (88.2% *vs* 45.5%, $p = 0.030$). However, involuntary inpatients presented lower LoS (≤ 20 days) of readmission (76.5% *vs* 36.4%) and a longer time interval from discharge to readmission (52.9% *vs* 27.3%), although these differences were not statistically significant (Table 2).

Other analyses

The F20-F31 subgroup consisted of 85 patients, including 37 involuntary inpatients (51.5%) and 48 voluntary inpatients (48.5%). Within this subgroup, 10 involuntary inpatients were readmitted (27.0%), compared with seven voluntary inpatients (14.6%). There were no statistically

Table 2 – Patients' characterization according to discharge status: voluntary *versus* involuntary (section 1 of 2)

Variable	Category	Voluntary inpatients	Involuntary inpatients	Total	*p*-value
Age	19 - 29	16 (21.9%)	13 (27.7%)	29 (24.2%)	0.484
	30 - 39	11 (15.1%)	10 (21.3%)	21 (17.5%)	0.368
	40 - 49	13 (17.8%)	10 (21.3%)	23 (19.2%)	0.617
	50 - 59	6 (8.2%)	9 (19.1%)	15 (12.5%)	0.072
	60 - 69	20 (27.4%)	4 (8.5%)	24 (20.0%)	0.012
	70 - 79	7 (9.6%)	1 (2.1%)	8 (6.7%)	0.109
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Sex	Female	30 (41.1%)	13 (27.7%)	43 (35.8%)	
	Male	43 (58.9%)	34 (72.3%)	77 (64.2%)	0.134
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Marital status	Single	35 (48.6%)	34 (72.3%)	69 (58.0%)	0.009
	Married	18 (25.0%)	3 (6.4%)	21 (17.6%)	0.009
	Divorced/separated	14 (19.4%)	10 (21.3%)	24 (20.2%)	0.841
	Widowed	5 (6.9%)	0 (0.0%)	5 (4.2%)	0.072
	Total	72 (100.0%)	47 (100.0%)	119 (100.0%)	
Occupation	Employed	24 (34.3%)	6 (12.8%)	30 (25.6%)	0.009
	Unemployed	22 (31.4%)	25 (53.2%)	47 (40.2%)	0.016
	Retired	21 (30.0%)	15 (31.9%)	36 (30.8%)	0.841
	Student	3 (4.3%)	1 (2.1%)	4 (3.4%)	0.549
	Total	70 (100.0%)	47 (100.0%)	117 (100.0%)	
Migration status	Migrant	13 (17.8%)	4 (8.5%)	17 (14.2%)	
	Portuguese	60 (82.2%)	43 (91.5%)	103 (85.8%)	0.154
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Main diagnosis	F03	5 (6.8%)	0 (0.0%)	5 (4.2%)	0.072
	F12 - F19	7 (9.6%)	9 (19.1%)	16 (13.3%)	0.134
	F20	6 (8.2%)	14 (29.8%)	20 (16.7%)	0.002
	F22	5 (6.8%)	3 (6.4%)	8 (6.7%)	0.920
	F23	1 (1.4%)	0 (0.0%)	1 (0.8%)	0.424
	F25	2 (2.7%)	3 (6.4%)	5 (4.2%)	0.317
	F29	18 (24.7%)	14 (29.8%)	32 (26.7%)	0.549
	F30 - F31	17 (23.3%)	3 (6.4%)	20 (16.7%)	0.016
	F32 - F33	6 (8.2%)	0 (0.0%)	6 (5.0%)	0.045
	F60	3 (4.1%)	0 (0.0%)	3 (2.5%)	0.162
	F09, F44, F79	3 (4.1%)	1 (2.1%)	4 (3.3%)	0.549
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	

F03 (unspecified dementia); F12 - F19 (substance use disorders); F20 (schizophrenia spectrum disorders); F22 (delusional disorders); F23 (acute and transient psychotic disorders); F25 (schizoaffective disorders); F29 (unspecified psychosis); F30 - F31 (mania and bipolar disorder); F32 - F33 (depressive disorder); F60 (personality disorders) and F09, F44, F79 (others).

Table 2 – Patients' characterization according to discharge status: voluntary *versus* involuntary (section 2 of 2)

Variable	Category	Voluntary inpatients	Involuntary inpatients	Total	*p*-value
Cardiovascular comorbidities	Yes	36 (49.3%)	18 (38.3%)	54 (45.0%)	
	No	37 (50.7%)	29 (61.7%)	66 (55.0%)	0.236
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Previous admissions	Yes	34 (46.6%)	39 (83.0%)	73 (60.8%)	
	No	39 (53.4%)	8 (17.0%)	47 (39.2%)	< 0.001
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Previous involuntary admission	Yes	15 (48.4%)	33 (86.8%)	48 (69.6%)	
	No	18 (51.6%)	5 (13.2%)	21 (30.4%)	< 0.001
	Total	31 (100.0%)	38 (100.0%)	69 (100.0%)	
Involuntary ambulatory treatment	Yes	3 (4.1%)	17 (36.2%)	20 (16.7%)	
	No	70 (95.9%)	30 (63.8%)	100 (83.3%)	< 0.001
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Injectable treatment	Yes	20 (27.4%)	38 (80.9%)	58 (48.3%)	
	No	53 (72.6%)	9 (19.1%)	62 (51.7%)	< 0.001
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Length of stay of index admission	≤ 20 days	56 (76.7%)	27 (57.4%)	83 (69.2%)	
	> 20 days	17 (23.3%)	20 (42.6%)	37 (30.8%)	0.026
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Orientation after discharge	Outpatient clinic	58 (79.5%)	35 (74.5%)	93 (77.5%)	0.549
	Day hospital	7 (9.6%)	11 (23.4%)	18 (15.0%)	0.036
	External facilities	8 (11.0%)	1 (2.1%)	9 (7.5%)	0.072
	Total	73 (100.0%)	47 (100.0%)	120 (100.0%)	
Readmission within one year	Yes	11 (15.3%)	17 (36.2%)	28 (23.5%)	
	No	61 (84.7%)	30 (63.8%)	91 (76.5%)	0.009
	Total	72 (100.0%)	47 (100.0%)	119 (100.0%)	
Legal status of readmission	Voluntary	6 (54.5%)	2 (11.8%)	8 (100.0%)	
	Involuntary	5 (45.5%)	15 (88.2%)	20 (100.0%)	0.030
	Total	11 (100.0%)	17 (100.0%)	28 (100.0%)	
Length of stay of readmission	≤ 20 days	4 (36.4%)	13 (76.5%)	17 (60.7%)	
	> 20 days	7 (63.6%)	4 (23.5%)	11 (39.3%)	0.053
	Total	11 (100.0%)	17 (100.0%)	28 (100.0%)	
Time to readmission	≤ 3 months	8 (72.7%)	8 (47.1%)	16 (57.1%)	
	> 3 months	3 (27.3%)	9 (52.9%)	12 (42.9%)	0.253
	Total	11 (100.0%)	17 (100.0%)	28 (100.0%)	

F03 (unspecified dementia); F12 - F19 (substance use disorders); F20 (schizophrenia spectrum disorders); F22 (delusional disorders); F23 (acute and transient psychotic disorders); F25 (schizoaffective disorders); F29 (unspecified psychosis); F30 - F31 (mania and bipolar disorder); F32 - F33 (depressive disorder); F60 (personality disorders) and F09, F44, F79 (others).

significant differences in readmissions between involuntary and voluntary inpatients in this subgroup ($p = 0.155$) (Table 3).

DISCUSSION

The aim of the present study was to evaluate whether patients discharged under voluntary status after an initial involuntary admission had a different risk of psychiatric decompensation, as assessed by the frequency of readmission within one year. No increase in readmission rates was observed among patients discharged under voluntary status.

We found that 60.8% of patients transitioned to voluntary hospitalization, while 39.2% remained involuntarily hospitalized. Regarding readmission within one year, 17 involuntary inpatients (36.2%) were readmitted, compared with 11 voluntary inpatients (15.3%) ($p = 0.009$). Involuntary inpatients were also more often readmitted under involuntary status

Table 3 – Readmissions within one year in the F20 - F31 subgroup

Variable	Category	Voluntary inpatients	Involuntary inpatients	Total	*p*-value
Readmission	Yes	7 (14.6%)	10 (27.0%)	17 (20.0%)	
Within one year	No	41 (85.4%)	27 (73.0%)	68 (80.0%)	0.155
	Total	48 (100.0%)	37 (100.0%)	85 (100.0%)	

(88.2% *vs* 45.5%, p = 0.030). Although the length of stay during readmission was higher among voluntary inpatients, this difference was not statistically significant. Similarly, the time to readmission was longer for involuntary inpatients, but the difference between the two groups did not reach statistical significance.

The most frequent diagnoses in the sample were F29, followed by F20, F30 - F31, and F12 - F19. Involuntary inpatients presented previous admissions more frequently, as well as previous involuntary admissions, had a higher length of stay during the index hospitalization, a greater need for injectable treatment, and were more frequently in involuntary ambulatory treatment.

The findings suggest that both the frequency of readmission and the frequency of involuntary readmission were higher for involuntary inpatients, corroborating previous results reported in the literature. These results also align with the findings by Hung *et al*, who observed that a prior history of involuntary admission was associated with an increased risk of readmission within one year.[14]

Our findings on the risk factors for involuntary hospitalization are consistent with previous research, including Portuguese studies on sociodemographic and clinical determinants. Among involuntary hospitalizations, the most frequent diagnosis was F29, and marital status was associated with voluntary discharge.[15] Additionally, a longer length of stay during the index hospitalization and a history of previous admissions were more common among involuntary inpatients.[9,16] Furthermore, these patients were significantly more likely to be subjected to coercive measures, including the administration of injectable medication without consent, both during previous involuntary outpatient treatment and during the index hospitalization.[6]

On the other hand, the F20 - F31 subgroup analysis showed a trend toward lower readmission rates among involuntary inpatients, but this difference did not reach statistical significance, consistent with the findings of Hung *et al*.[14] This result contrasts with the main sample, suggesting that patients with severe diagnoses need cautious consideration when transitioning to voluntary treatment.

To the best of our knowledge, this is the first study to compare outcomes for patients with mental illness who were discharged under voluntary status after an initial involuntary hospitalization, in order to assess the prognostic value of this change in legal status. However, some limitations warrant consideration.

One limitation of our study is that voluntary inpatients may have less severe diagnoses, and the transition to voluntary treatment may be an indicator of a better prognosis when compared with patients who remained under involuntary hospitalization, which potentially explains the lower readmission rates within one year. Therefore, this study is subject to potential selection bias in causal inference, given that the transition to a voluntary treatment regimen is inherently reactive and typically occurs among individuals with a more favorable clinical course, lower baseline severity, and higher adherence to treatment. Consequently, observed associations may be explained by these prognostic factors rather than a direct causal effect of the treatment regimen change. Moreover, since this is a retrospective study which relies on the information registered on the patients' clinical records, some data were incomplete or missing. Being a single-center study also limits the generalizability of the findings. Finally, this study is limited by its small sample size and the lack of a control group, which could have led to selection bias.

Future studies could adopt an observational prospective design to strengthen the validity of causal inferences in this area. Additionally, further research could examine readmission frequency by creating subgroups based on longer index hospitalization lengths or the type of injectable treatment administered during the index hospitalization, as proxys of baseline severity.

In addition to patient characteristics, future research should also investigate organizational and systemic factors - such as limited staffing or structural resources in inpatient units, as well as the admission via the emergency department - as potentially contributing factors to involuntary hospitalization. Understanding how these factors could influence the likelihood of transitioning to voluntary treatment and subsequent readmission rates could provide important insights for improving patient outcomes and optimizing mental health care delivery.[17]

CONCLUSION

Involuntary hospitalization was associated with worse outcomes within one year, underscoring that its use should be proportional to the risk and subject to periodic review due to its ethical and legal implications. Conversion to voluntary hospitalization did not worsen psychiatric decompensation, supporting the role of specialist re-evaluation. This transition process is both reasonable and respectful of patient autonomy, while ensuring appropriate treatment without compromising psychiatric stability.

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AUTHOR CONTRIBUTIONS

MMC: Study conception and design, data collection and analysis, writing of the manuscript.

JTC: Study conception and design, data collection, critical review of the manuscript.

ARF, HS: Study conception and design, data collection, literature review, critical review of the manuscript.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in October 2024.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

CONFLICTS OF INTEREST

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