

# Is intensive home-treatment a real alternative to classical hospitalization for managing acute psychiatric processes? Insights from clinical practice



## ¿Es la hospitalización domiciliaria una alternativa real a la hospitalización clásica para el tratamiento de los procesos psiquiátricos agudos? Reflexiones desde la práctica clínica

### Introduction

Since the turn of the new century, many western countries have progressively implemented intensive home treatment (IHT) as an alternative to inpatient management for people experiencing a psychiatric acute episode. However, the profiles of patients more suitable for IHT have not been clearly defined yet,<sup>1</sup> and research in this regard is scarce,<sup>1–4</sup> mainly limited to the United Kingdom,<sup>2–4</sup> and inconclusive. Therefore, there is an evident need for more international studies addressing this topic. In this vein, the aim of the present study was to evaluate, in a wide Spanish sample, which sociodemographic and clinical characteristics determine that a patient with an acute psychiatric illness is admitted to hospital or to IHT.

### Material and methods

Student's *t*-tests, chi-square tests, and association measures were used to compare the sociodemographic and clinical characteristics of the patients voluntarily admitted in-ward ( $N=216$ ) or to IHT ( $N=90$ ) during the period comprised between 1st February 2017 and 31st July 2018. A logistic regression model was built to assess the contribution of each factor, using a backward stepwise selection strategy (enter  $p$  value  $< 0.05$ , remove  $p$  value  $> 0.10$ ). The discrimination power of the model was evaluated by means of the area under the receiver operating characteristic curve (AUC); sensitivity, specificity, and positive and negative predictive values were also calculated. Finally, a 5-fold cross-validation technique was used to test the performance of this model. All hypotheses were tested with a two-sided significance level of 0.05. Data were retrospectively obtained from the medical records of the emergency ward of Hospital de Sant Pau in Barcelona (the main admission gateway), except for severity at admission, which was obtained from the notes of the admission in hospital or IHT, and was assessed by means of the 17-item Hamilton Rating Scale for Depression, the Young Mania Rating Scale, and the Positive and Negative Symptom Scale. As IHT always requires patient's will, compulsory in-ward admission was considered an exclusion criterion.

### Results

Patients admitted in-ward were more likely to have previous suicide attempts, severe behavior disorders, active suicidal thoughts, or a non-psychotic/non-affective disorder. By contrast, patients admitted to IHT were more likely to have passive death wishes or a psychotic disorder (Table 1). Affective disorders were similarly distributed between both groups. There were no differences in duration of illness, presence of previous admissions, active substance use, level of insight, and clinical severity. Most patients had a partial insight and a moderate-to-high clinical severity. The regression model included age, having a caregiver, previous suicide attempts, non-psychotic/non-affective disorder, suicidal thoughts, and severe behavior disorder. The AUC of this model was 0.76 (95% CI = 0.71–0.82). Sensitivity was 84.51%, specificity was 42.22%, positive predictive value was 77.59%, and negative predictive value was 53.52%. Results of the cross-validation process suggested that the real predictive power of the model was very low (pseudo- $R^2 = 0.14$ ).

### Discussion

Both severe behavior disorders and active suicide thoughts seem logical contraindications for IHT, and have been also associated to hospital admission in previous studies.<sup>2,4</sup> Similarly, history of previous suicide attempts may be related to inpatient management because of its relationship with a higher suicidal risk.<sup>5</sup> However, which disorders are more frequently managed at home remains unclear. Our results show that having a psychotic disorder increases the probability to be admitted to IHT, while having a non-psychotic/non-affective mental disorder increases the probability of in-ward treatment, which is consistent only with some previous research.<sup>1,2,6</sup> These discrepancies between studies may lie in the different distribution of mental health services among areas.

Despite these results, the low predictive power of the regression model suggests that the decision of offering an in-ward or a home admission may also depend on other variables than those directly associated with the patient, like the availability of beds in each facility or the psychiatrist's personal preferences, as suggested elsewhere.<sup>1</sup>

Last but not least, it is interesting to emphasize that both groups had a similar distribution of the rest of sociodemographic and clinical variables, including clinical severity and level of insight. In our opinion, this supports that IHT can be a real alternative to classical hospitalization.

In conclusion, IHT may be able to take on the management of most of the patients suffering a psychiatric acute process who accept treatment, keeping the hospital only for those situations in which there is a risk for the physical integrity of the patient or others. So, IHT may be a cost-effective<sup>7</sup> way to reinforce care outside hospitals, as proposed by some authors in the context of the COVID-19 pandemic.<sup>8,9</sup> Further studies with experimental designs may

**Table 1** Sociodemographic and clinical characteristics of patients admitted to hospital (N=216) vs patients admitted to IHT (N=90).

	Sociodemographic characteristics				Clinical characteristics				
	Hospital		IHT		Hospital		IHT		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Age (years)*	49.71	18.84	43.50	15.66	Duration of illness (years)	18.00	18.74	13.84	17.12
	Hospital		IHT			Hospital		IHT	
	N	%	N	%		N	%	N	%
Sex (female)	119	55.09	52	57.78	Previous admissions	150	69.44	56	62.22
Educational level					Previous suicide attempt(s)*	53	24.53	6	6.67
No studies	8	3.70	0	0.00	Diagnosis*				
Primary studies	37	17.13	17	18.89	Affective disorder	89	41.20	36	40.00
Secondary studies	73	33.80	31	34.44	Psychotic disorder	91	42.13	50	55.56
High education	49	22.69	26	28.89	Other disorders	36	16.67	4	4.44
Unknown	49	22.69	16	17.78	Substance use	36	16.67	13	14.44
Employment situation					Severe behavior disorder*	51	23.61	9	10.00
Active	36	16.67	9	10.00	Level of insight				
Off sick/unemployed	64	29.63	37	41.11	Low	49	22.79	15	16.67
Permanent disability	62	28.70	30	33.33	Moderate	110	50.93	43	47.78
Pensioner	41	18.98	8	8.89	High	57	26.51	32	35.56
Never worked	12	5.56	6	6.67	Clinical severity				
Unknown	1	0.46	0	0.00	Minimal	38	17.59	16	17.77
Caregiver*	137	63.43	74	82.22	Mild	56	25.93	28	31.11
					Moderate	62	28.70	24	26.67
					Severe	60	27.78	22	24.44
					Suicidal behavior				
					Absence	106	49.07	59	65.56
					Passive death wishes	29	13.43	19	21.11
					Suicidal thoughts	56	25.93	6	6.67
					Suicide attempt	25	11.57	6	6.67

\*  $p < 0.05$ .

help to draw more robust conclusions on which factors are associated with a successful home-treatment.

## Conflict of interest

The authors declare no conflicts of interest.

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Ana Martín-Blanco<sup>a,b,c,\*</sup>, Laura Calvo-Saiz<sup>a,b</sup>,  
Jacopo Baccarin<sup>a,b</sup>, Alba González-Fernández<sup>d</sup>,  
Alejandro Keymer-Gausset<sup>a,b</sup>, Sara Vieira-Costa<sup>d</sup>,  
Núria Ribas-Fitó<sup>d</sup>, Carles Garcia-Ribera<sup>a,b</sup>

<sup>a</sup> *Servicio de Psiquiatría, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain*

<sup>b</sup> *Institut d'Investigació Biomèdica, Sant Pau (IIB-SANT PAU), Barcelona, Spain*

<sup>c</sup> *Centro de Investigación Biomédica en Red de Salud Mental, CIBERSAM, Av. Monforte de Lemos, 3-5, pabellón 11, planta 0, 28029 Barcelona, Spain*

<sup>d</sup> *Unidad de Hospitalización Parcial a Domicilio (UHPAD), CPB-Serveis Salut Mental, Passatge Còrsega 20, 08026 Barcelona, Spain*

\* Corresponding author.

E-mail address: [amartinbl@santpau.cat](mailto:amartinbl@santpau.cat) (A. Martín-Blanco).

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