

Direct healthcare costs for the management of patients with Opioid Use Disorder treated with methadone and buprenorphine/naloxone in Real-World setting in Spain. COSTEDOPIA Study

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INTRODUCTION

- Opioid use disorder (OUD) is a chronic neurobehavioral syndrome characterized by frequent relapses and concomitant diseases (psychiatric and infectious), by a high rate of morbidity and mortality and by a high economic impact for both the individual and society¹⁻⁵.
- In 2016, in the European Union (EU), there were approximately 1.3 million people (3.6-4.4 cases per 1,000 population) who were high-risk opioid users, with heroin being the most common opioid. In the EU 628,000 individuals received opioid substitution treatment; 63% were treated with methadone and 35% with buprenorphine-based therapies⁶.
- Methadone and the combination of buprenorphine and naloxone (B/N) are the treatments for OUD used most often in Spain⁷.

OBJECTIVE

To evaluate the economic impact in patients with Opioid Use Disorder (OUD) treated with methadone or buprenorphine/naloxone (B/N) in routine clinical practice in Spain. (COSTEDOPIA study).

METHODS

- COSTEDOPIA was an observational, retrospective and real-world study, conducted in four hospitals in Autonomous Communities of Catalonia, Valencian Community and Murcia, in Spain, between October 2017 and March 2018.
- Inclusion criteria:
 - Patients older than 18 years
 - Diagnostic of OUD according to the Diagnostic and Statistical Manual of Mental Disorders DSM-IV/5
 - Patients with at least 12 months of methadone or B/N treatment
- Exclusion criteria:
 - Patient with severe uncontrolled systemic diseases, severe physical disabilities not related to OUD
 - Absence of relevant data in the medical record
 - Lack of willingness or inability to comply with the study procedures

- To avoid bias in the information collection and in the resulting data analysis, on even days were recruited patients receiving B/N and on odd days patients receiving methadone.
- Data collected from medical records and patient interviews included the sociodemographic variables and the consumption of resources associated with the OUD management over 12 months.
- Resources were classified as:
 - Management of the comorbidities associated with OUD
 - Relapses
 - Overdoses
 - Resources associated with the dependence per se
- The total direct healthcare costs, considering all the above categories would include hospitalizations, visits to specialists, medical tests, urine drug screen (use on top) and concomitant medication.
- Unitary health costs (€, data 2018) were obtained from an eHealth database⁸ and the Spanish Catalogue of Medicines⁹.

RESULTS

- A total of 203 patients (102 treated with methadone and 101 with B/N) were included in the analysis.
- Significant differences were found in familiar stability (higher in patients with B/N) and infectious comorbidities (higher prevalence of HIV / Hepatitis B in the methadone group) (Table 1).
- A 94.06% in the B/N group and 93.14% in the methadone group, were in the maintenance phase of OUD treatment (Table 2).
- Significant differences were found in number of relapses and in positive detections of unprescribed opioids in urine (both higher in methadone group) (Table 2), but there were no significant differences in the cost of these relapses (Figure 1).
- Total direct healthcare cost per patient was €3,007.04 for methadone and €2,556.75 for B/N (cost savings €450.29; p-value=0.107) (Figure 1).
- There were statistically significant differences between the treatment groups in the costs per patient related to the dependence per se associated with OUD (Figure 1).

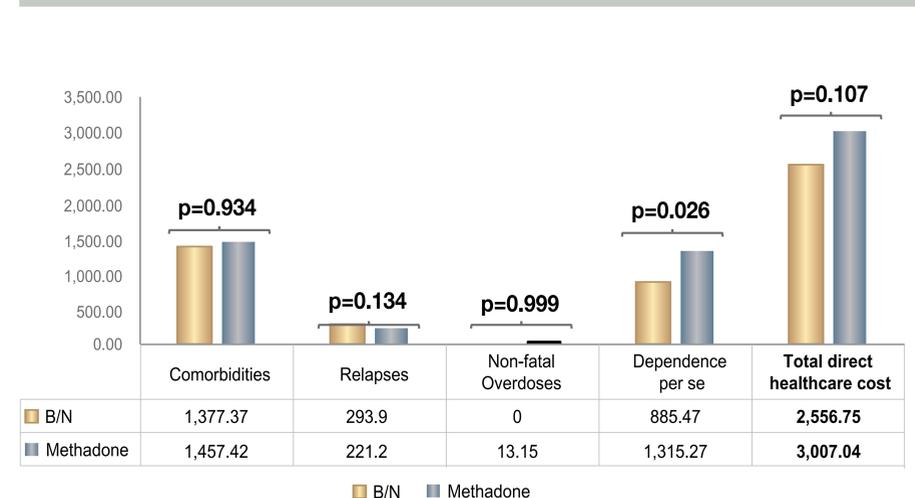
- There were more relapses in the methadone group (p=0.02) (Table 2). In B/N group, the relapsers had a lower mean dose (6.60 mg/day) compared with no-relapsers (mean dose 9.82 mg/day) (p=0.040). No statistically significant difference in the mean dose of methadone in relapsers Vs. no relapsers).

Table 2: Treatment characteristics

	B/N (n=101)	Methadone (n=102)	Total (n=203)	p-value
Dispensation treatment. Number of patients (%)				
Hospital pharmacy	6 (5.94)	0 (0)	6 (2.96)	0.037
Retail pharmacy	58 (57.43)	5 (4.90)	63 (31.03)	<0.001
Health center/outpatient drug clinics	37 (36.63)	79 (77.45)	116 (57.14)	<0.001
Mobile treatment vans	0 (0)	3 (2.9)	3 (2.94)	0.248
Methadone dispensary center	0 (0)	15 (14.71)	15 (14.71)	<0.001
Treatment dose, mg				
Mean (SD)	8.86 (6.02)	71.31 (48.28)	—	—
Min-Max	0.5-32	4-225	—	—
Relapses. Number of patients (%)				
Relapses	30 (29.70)	46 (45.10)	76 (37.44)	0.02
Positive detections of unprescribed opioids in urine				
Patients with positive detections (%)	9 (8.91)	28 (27.45)	37 (18.22)	0.001
Mean number of positive detections (SD)	2 (1.12)	5.6 (6.46)	4.76 (5.84)	0.086

B/N: buprenorphine/naloxone; SD: standard deviation

Figure 1. Annual healthcare cost per patient with OUD (€, 2018)



B/N: buprenorphine/naloxone; OUD: opioid use disorder

Table 1: Sociodemographic and clinical characteristics

	B/N (n=101)	Methadone (n=102)	Total (n=203)	p-value
Age. Mean, years (SD)	46.38 (8.77)	46.93 (8.21)	46.66 (8.47)	0.284
Gender. Number of patients (%)				
Men	78 (77.22)	75 (73.53)	153 (75.37)	0.625
Work situation. Number of patients (%)				
Employed	31 (30.69)	17 (16.67)	48 (23.64)	0.028
Unpaid work	4 (3.97)	2 (1.96)	6 (2.96)	0.669
Unemployed	25 (24.75)	40 (39.21)	65 (32.02)	0.039
Retired/disability	39 (38.61)	42 (41.18)	81 (39.90)	0.818
Other	2 (1.98)	1 (0.98)	3 (1.48)	0.993
Family situation. Number of patients (%)				
Stable	89 (88.12)	70 (68.63)	159 (78.3)	0.001
Unstable	12 (11.88)	32 (31.37)	44 (22.67)	—
Legal situation. Number of patients (%)				
Crimes in the last year	33 (32.67)	50 (49.01)	83 (40.88)	0.026
Co-occurrent consumption of other substances. Number of patients (%) *				
Alcohol	42 (41.58)	43 (42.15)	85 (41.87)	1
Cannabis	39 (38.61)	46 (45.09)	85 (41.87)	0.392
Cocaine	58 (67.42)	49 (48.03)	107 (52.70)	0.198
Sedative drugs	26 (25.74)	24 (23.52)	50 (24.63)	0.745
Psychiatric comorbidities. Number of patients (%)				
Depression	25 (24.75)	19 (18.62)	44 (21.67)	0.308
Induced psychosis	7 (6.93)	11 (10.78)	18 (8.86)	0.460
Other personality disorders	38 (37.62)	33 (32.35)	71 (34.97)	0.377
Infectious comorbidities. Number of patients (%)				
Tuberculosis	4 (3.96)	5 (4.90)	9 (4.43)	1
Hepatitis B	5 (4.95)	20 (19.60)	25 (12.31)	0.003
Hepatitis C	45 (44.55)	60 (58.82)	105 (51.72)	0.058
HIV	14 (13.86)	30 (29.41)	44 (21.57)	0.010

B/N: buprenorphine/naloxone; HIV: human immunodeficiency virus; SD: standard deviation

* Some patients could have met criteria for addiction to other substances

CONCLUSIONS

- Based on the COSTEDOPIA Study in a real-world setting in Spain, treatment of OUD patients with B/N results in direct healthcare cost savings, compared to methadone.
- Patients on B/N reported greater family, work and legal stability, and had a lower percentage of relapses and lower consumption of other illegal opioids.
- At this regard, patients on methadone have a higher comorbidity, which could increase the costs of managing the OUD when compared to B/N.

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