

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

- Addiction or opioid dependence is a chronic disorder characterized 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 are high-risk opioid users. 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 opioid dependence used most often in Spain⁷.

Objective

To estimate and compare the economic impact and concomitant diseases in patients with Opioid Use Disorder (OUD) treated with methadone or buprenorphine/naloxone (B/N) in a real-world setting in Spain (COSTEDOPIA Study)

Methods

- COSTEDOPIA was an observational, retrospective and real-world study.
- The study was conducted in four hospitals in Catalonia, Valencian Community and Murcia, 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
- Data collected from medical records and patient interviews included the sociodemographic variables and the consumption of resources associated with the OUD treatment over 12 months.
- Resources were stratified into different categories:
 - Management of the comorbidities associated with OUD
 - Relapses
 - Overdoses
 - Resources associated with treatment of dependence *per se* associated with OUD
- Direct healthcare cost included hospitalizations, visits to specialists, medical tests (ECG, detection of illegal opioids in urine and blood), urine drug screen (use on top) and concomitant medication.
- Unitary healthcare costs (€ year 2018 values) 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 in the methadone group) (Table 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) (Table 2).
- There were statistically significant differences between the treatment groups in the costs per patient related to the dependence *per se* associated with OUD.
- There were no significant differences in the cost per patient of comorbidities management (€1,457.42 with methadone and €1,377.37 with B/N; cost savings €80.05; p-value=0.934).

Conclusions

- Patients with OUD are characterized by:
 - the severity of their complications
 - frequent poly drugs use
 - co-occurrent psychiatric and other comorbidities.
- 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.

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 (%)				
Work: 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)	-
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
Treatment phase, number of patients (%)				
Maintenance	95 (94.06)	95 (93.14)	190 (93.60)	1
Medically supervised withdrawal	6 (5.94)	7 (6.86)	13 (6.40)	1
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
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

* Some patients were addicted to various substances; B/N: buprenorphine and naloxone

Table 2: Annual healthcare costs per patient with OUD

	B/N (n=101)	Methadone (n=102)	Difference B/N vs. Methadone	Total (n=203)	p-value
Comorbidities, € (SD)	1,377.37 (2,323.80)	1,457.42 (2,553.51)	-80.05	1,417.59 (2,436.2)	0.934
Relapse, € (SD)	293.9 (1,656.18)	221.2 (719.53)	72.70	257.37 (1,272.03)	0.134
Overdose, € (SD)	0.00 (0.00)	13.15 (80.65)	-13.15	6.61 (57.40)	0.999
Dependence <i>per se</i> , € (SD)	885.47 (1,097.86)	1,315.27 (1,186.70)	-429.80	1,101.43 (1,160.70)	0.026
Total direct healthcare costs, € (SD)	2,556.75 (3,303.71)	3,007.04 (3,323.4)	-450.29	2,783 (3,313.10)	0.107

SD: Standard Deviation; B/N: buprenorphine and naloxone

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