

Real world treatment patterns, outcomes, resource utilization and costs in treatment-resistant major depressive disorder: PATTERN, a retrospective cohort study in Belgium

Pharmacoeconomics open

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Supplementary Table 1 Drugs per drug category

Drug category	Drugs
SSRI	escitalopram, sertraline, paroxetine, fluoxetine, citalopram
SNRI	trazodone, venlafaxine, duloxetine
TCA	amitriptyline, dosulepin, clomipramine, nortriptyline
Other AD	bupropion, agomelatine, mianserine, mirtazepine, reboxetine, vortioxetine, moclobemide, selegiline, maprotiline
AP	quetiapine, olanzapine, aripiprazole, amisulpride, risperidon
MS	valproic acid, lamotrigine, carbamazepine

Abbreviations: AD = antidepressants; AP= anti-psychotics; MS=mood stabilizer; SNRI = serotonin-norepinephrine reuptake inhibitors; SSRI = selective serotonin reuptake inhibitors ; TCA = tricyclic antidepressants.

Supplementary Table 2 Resource use during observation period in the MDE health state (n=125)

	N (%) of patients using resource	Average (SD) number of use in patients with resource use	Average (SD) number of monthly resource use	Total number
Hospitalization	39 (31.2%)	2.9 (2.2)	0.05 (0.09)	112
Day Hospitalization	12 (9.6%)	30.6 (57.1)	0.152 (0.997)	367
Rehabilitation (hours)	5 (4.0%)	256.6 (337.7)	0.5 (4.1)	1,283
ECT	5 (4.0%)	6.8 (4.8)	0.014 (0.025)	34
Psychotherapy with psychiatrist (sessions)	78 (62.4%)	23.4 (58.9)	0.7 (2.5)	1,800
Psychotherapy with psychologist (sessions)	4 (3.2%)	14.9 (15.2)	0.037 (0.229)	90
Psychiatrist visits without psychotherapy	42 (33.6%)	17.8 (9.3)	0.309 (0.516)	747
ER visits	21 (16.8%)	3.0 (4.7)	0.026 (0.113)	62
GP visits	25 (20.0%)	4.4 (4.2)	0.046 (0.132)	111
Lab tests	25 (20.0%)	6.8 (6.8)	0.070 (0.209)	169
ECG	31 (24.8%)	1.4 (1.1)	0.018 (0.041)	43
EEG	34 (27.2%)	1.3 (0.6)	0.018 (0.033)	43
Imaging	4 (3.2%)	1.0 (0.0)	0.002 (0.009)	4

Abbreviations: ECG = electrocardiogram; ECT = electroconvulsive therapy; EEG = electroencephalogram; ER = emergency room; GP = general practitioner; MDE = major depressive episode.

Supplementary Figure 1 Sequence of health states over time and number of patients (%) per sequence, ordered retrospectively starting from the last health state at the end of the observation period.

	N	Total % of patients per health state at the end of the observation period
MDE	30 (24.0%)	MDE: 50.4%
MDE Rs MDE	12 (9.6%)	
MDE Rm MDE	3 (2.4%)	
MDE Rs Rm MDE	4 (3.2%)	
MDE Rs MDE Rs MDE	5 (4.0%)	
MDE Rs Rm Rs MDE	1 (0.8%)	
MDE Rs Rm Rc MDE	2 (1.6%)	
MDE Rs Rm MDE Rs MDE	1 (0.8%)	
MDE Rs MDE Rs Rm MDE	1 (0.8%)	
MDE Rs MDE Rs MDE Rs MDE	2 (1.6%)	
MDE Rs Rm Rc MDE Rm Rc MDE	1 (0.8%)	
MDE Rs Rm Rc MDE Rs Rm MDE Rs MDE	1 (0.8%)	
MDE Rs	8 (6.4%)	Response: 18.4%
MDE Rs MDE Rs	8 (6.4%)	
MDE Rm MDE Rs	1 (0.8%)	
MDE Rs Rm MDE Rs	1 (0.8%)	
MDE Rs MDE Rs MDE Rs	2 (1.6%)	
MDE Rs Rm Rc MDE Rs	1 (0.8%)	
MDE Rs Rm Rc MDE Rs MDE Rs MDE Rs	1 (0.8%)	
MDE Rs MDE Rs Rm Rc MDE Rs Rm MDE Rs	1 (0.8%)	
MDE Rm	3 (2.4%)	Remission: 11.2%
MDE Rs Rm	2 (1.6%)	
MDE Rm MDE Rm	1 (0.8%)	
MDE Rm Rc MDE Rm	1 (0.8%)	
MDE Rs MDE Rs Rm	3 (2.4%)	
MDE Rs MDE Rs MDE Rm	1 (0.8%)	
MDE Rs Rm MDE Rs Rm	1 (0.8%)	
MDE Rs Rm Rc MDE Rs Rm	1 (0.8%)	
MDE Rs Rm MDE Rs Rm Rc MDE Rs Rm	1 (0.8%)	
MDE Rm Rc	6 (4.8%)	Recovery: 19.2%
MDE Rs Rm Rc	9 (7.2%)	
MDE Rs Rm MDE Rm Rc	2 (1.6%)	
MDE Rs MDE Rs Rm Rc	2 (1.6%)	
MDE Rm MDE Rs Rm Rc	1 (0.8%)	
MDE Rs Rm MDE Rs Rm Rc	1 (0.8%)	
MDE Rs Rm MDE Rs MDE Rs Rm Rc	1 (0.8%)	
MDE Rs MDE Rs Rm MDE Rs Rm Rc	1 (0.8%)	
MDE Rs Rm Rc MDE Rs Rm Rc MDE Rs Rm Rc	1 (0.8%)	
MDE Rs Rm Rc D	1 (0.8%)	Deceased: 0.8%

D = deceased; MDE = major depressive episode; Rc = recovery,
Rm = remission; Rs = Response

Supplementary Table 3 Average direct cost per patient per month

	MDE	Response	Remission	Recovery
N of patients	125	80	55	35
Average duration in months	19.3	11.9	7.7	12.7
Average (percentile 0.025-0.975) monthly cost per health state				
Hospitalization	€1,082.58 (€0-€8,728.25)	€26.69 (€0-€370.47)	€23.14 (€0-€0.00)	€0.00 (€0-€0.00)
Hospitalization	€973.31 (€0-€8,680.08)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
Day hospitalization	€109.27 (€0-€743.49)	€26.69 (€0-€370.47)	€23.14 (€0-€0.00)	€0.00 (€0-€0.00)
Non-pharmaceutical treatments	€11.75 (€0-€131.40)	€15.72 (€0-€0.00)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
Rehabilitation	€8.77 (€0-€116.77)	€15.72 (€0-€0.12)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
ECT	€2.98 (€0-€41.61)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
Visits	€74.06 (€0-€245.87)	€66.83 (€0-€285.24)	€70.83 (€2-€188.50)	€61.87 (€0-€162.57)
Psychotherapy psychologist	€1.67 (€0-€25.90)	€2.75 (€0-38.16)	€0.00 (€0-0.00)	€0.00 (€0-0.00)
Psychotherapy psychiatrist	€54.88 (€0-€245.78)	€50.15 (€0-286.19)	€64.98 (€0-€189.75)	€61.30 (€0-162.68)
Psychiatrist visits	€15.29 (€0-€76.52)	€12.65 (€0-€74.94)	€5.48 (€0-€49.03)	€0.11 (€0-€0.59)
ER visits	€1.01 (€0-€4.06)	€0.12 (€0-€0.00)	€0.00 (€0-€0.00)	€0.09 (€0-€0.46)
GP visits	€1.21 (€0-€13.32)	€1.16 (€0-€9.01)	€0.37 (€0-€3.40)	€0.30 (€0-€1.56)
Gastroenterologist visit	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)	€0.07 (€0-€0.39)
Tests	€6.72 (€0-€56.57)	€1.77 (€0-€23.30)	€0.54 (€0-€5.83)	€0.78 (€0-€4.10)
Lab tests	€4.84 (€0-€42.96)	€1.60 (€0-€23.30)	€0.33 (€0-€5.83)	€0.78 (€0-€4.10)
ECG	€0.32 (€0-€1.88)	€0.02 (€0-€0.00)	€0.04 (€0-€0.00)	€0.00 (€0-€0.00)
EEG	€1.27 (€0-€7.37)	€0.15 (€0-€0.15)	€0.17 (€0-€0.00)	€0.00 (€0-€0.00)
Imaging	€0.29 (€0-8.08)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
Drugs	€39.21 (€1-€161.76)	€46.64 (€2-€135.16)	€34.72 (€4-€153.52)	€31.28 (€0-€100.49)
SSRI	€4.43 (€0-19.57)	€4.50 (€0-€24.34)	€3.32 (€0-€18.24)	€3.09 (€0-€12.20)
SNRI	€5.75 (€0-32.59)	€7.25 (€0-€34.50)	€7.00 (€0-€28.29)	€5.58 (€0-€28.90)
TCA	€3.30 (€0-22.10)	€5.76 (€0-€40.29)	€6.63 (€0-€41.41)	€5.69 (€0-€30.89)
Other AD	€4.22 (€0-22.10)	€6.60 (€0-€57.49)	€0.77 (€0-€12.25)	€1.61 (€0-€19.83)
AP	€14.15 (€0-108.01)	€17.12 (€0-€89.07)	€10.88 (€0-€65.25)	€9.84 (€0-€59.50)
MS	€2.63 (€0-28.97)	€2.84 (€0-€37.48)	€2.08 (€0-€8.57)	€1.72 (€0-€12.64)
Lithium	€0.22 (€0-2.80)	€0.08 (€0-€0.80)	€0.06 (€0-€0.00)	€0.35 (€0-€5.45)
Benzodiazepines	€3.11 (€0-27.71)	€1.17 (€0-€9.45)	€1.58 (€0-€13.17)	€1.55 (€0-€11.60)
Hypnotics	€0.43 (€0-5.84)	€0.28 (€0-€3.43)	€1.64 (€0-€19.37)	€1.23 (€0-€15.01)
Beta-blockers	€0.43 (€0-4.60)	€0.60 (€0-€8.48)	€0.67 (€0-€5.67)	€0.48 (€0-€6.71)
Thyroxine	€0.11 (€0-1.62)	€0.27 (€0-€4.27)	€0.08 (€0-€1.42)	€0.14 (€0-€0.75)
Other drugs	0€-42€ (€0-€3.20)	€0.17 (€0-€0.10)	€0.00 (€0-€0.00)	€0.00 (€0-€0.00)
Total costs	€1,214.32 (€7-€8,927.15)	€157.65 (€9-€956.84)	€129.23 (€13-€479.02)	€93.93 (€6-€228.04)
Bootstrap* mean, (0.025-0.975 percentile)	€1,215.99 (€6-€8,655.71)	€156.43 (€12-€898.34)	€128.69 (€14-€564.03)	€93.96 (€7-€219.32)

*10,000 resamples

Funding/support: This research was supported by Janssen-Cilag NV, Beerse, Belgium.

Potential conflicts of interest: De Vos C., Peeters E., Pype S. and Vandersmissen I. are employees of Janssen-Cilag NV. Realidad, employer of Strens D., received consulting fees from Janssen-Cilag NV. Dr. Degraeve has served as speaker/member of an advisory board/has received research support from Janssen-Cilag NV, EG, Eli-Lilly, AstraZeneca, Sanofi, Pfizer, Otsuka, GSK, Lundbeck and Pfizer. Dr. Dreesen has received support from Janssen-Cilag NV and EG. Dr. Debruecker and Dr. Kestens have received research support from Janssen-Cilag NV.