Treatment trajectory in people with borderline personality disorder from diagnosis to 12 months post-diagnosis

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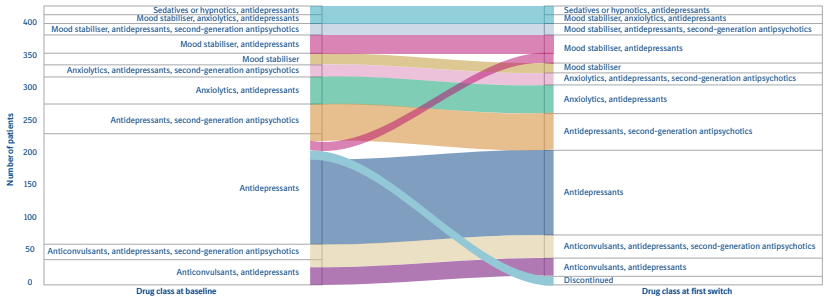
KEY CONCLUSIONS

- Antidepressants were the most frequently prescribed medication at baseline for patients with borderline personality disorder (BPD), either alone or in combination with other medication classes (**Figure 1**)
- The diversity of treatments at diagnosis and 12 months post-diagnosis highlights the complex symptomatology of BPD and the need to better understand its neurobiology to improve pharmacological treatment strategies

Figure 1. Most common treatment journey from baseline to first switch within 12 months, by medication class (N=1461)[a]



[a]Only the most common journeys are represented in the diagram; the patient count represented by the y-axis may not add up to the total patient count in the subgroup cohort. Sankey diagrams showing the most common treatment journeys broken down by specific drugs are available as supplementary materials (accessible via QR code at the bottom right of poster).

INTRODUCTION

1 CONTEXT
- Borderline personality disorder (BPD) is a debilitating psychiatric disorder with a diverse range of symptoms and high societal costs[1,2]
- Though medications are often used to treat specific core symptoms, currently there are no approved pharmacological treatments for BPD and off-label use of pharmacological drugs is widespread[1,3]

2 UNMET NEED
- Although national treatment guidelines exist, they emphasise psychotherapy as first line treatment and may differ in terms of their recommendations regarding medication[4]

3 STUDY AIM
- To better understand the clinical landscape of BPD by gathering real-world data on clinical presentation, treatment pathways and outcomes of individuals with BPD

POSTER AIM

To characterise the treatment trajectory of patients with BPD within the first 12 months post-diagnosis to help identify any unmet needs and treatment gaps

METHODS

STUDY DESIGN

50+ million rows of patient data | **530k+** patients | **20+ years** longitudinal data

A non-interventional cohort study

Electronic health records

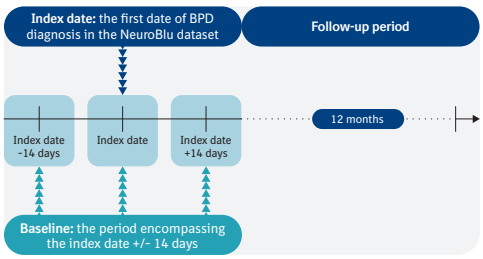
NeuroBlu

25 United States mental health systems

De-identified data from the NeuroBlu Database (Version21R2)[a,5]

[a]A longitudinal behavioural health real-world database comprising both structured and unstructured patient-level clinical data.

Index, baseline and follow-up period



KEY INCLUSION CRITERIA

- ≥12 years old
- ≥1 recorded diagnosis of BPD between 2001 and 2020
- ≥1 psychotropic prescription recorded ±14 days from the index date, with a treatment period of ≥14 days
- Patients with ≥52 weeks of follow-up data from the index date

KEY EXCLUSION CRITERIA

- Current diagnosis of paranoid, schizoid, schizotypal or antisocial personality disorders
- Lifetime diagnosis of schizophrenia or related disorders, bipolar I disorder, or delusional disorder

DATA ANALYSES PERFORMED

Descriptive statistics were used to examine the following measures:
- Pharmacological treatments and treatment combinations at baseline
- Treatment patterns during the 12 months following diagnosis
- Association between symptoms and treatments
  - Symptom classes assessed included emotional dysregulation[a], suicidal intent/ideation and suicidal attempt/self-injury

[a]Emotional dysregulation included the following BPD symptoms: affect – aggressive, affect – irritable/angry, affect – labile, affect – intense, mood – irritable/angry, mood – labile. Symptoms were derived from Mental State Examination data using natural language processing[6]; symptoms of interest were determined *a priori*.

RESULTS

PHARMACOLOGICAL TREATMENT AT BASELINE

13,444 patients identified

33.0 (12.8) years Mean (SD) age

Female **84%**

White **59%**

68% (n=9101) had been prescribed pharmacological treatments at baseline

of whom

16% (n=1461) had 12 months of follow-up data

Of patients prescribed pharmacological treatments at baseline:

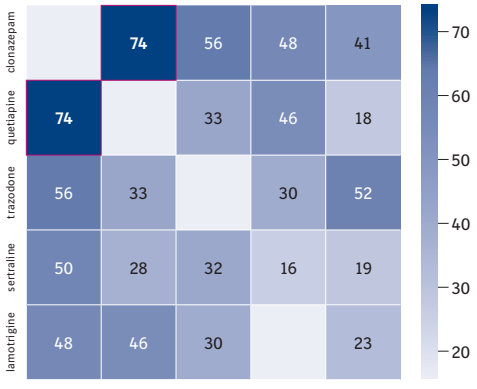
83% were prescribed >1 medication at baseline

80% were first prescribed antidepressants either alone or in combination with other medication classes at baseline

TREATMENT COMBINATIONS AT BASELINE

- The most common medication combination was clonazepam and quetiapine, prescribed to 5% of patients (**Figure 3**)

Figure 2. Heatmap of number of patients with treatment combinations prescribed at baseline in those with 12 months of follow-up data[a]



[a]In patients prescribed >1 medication. The darker blue indicates a more frequently prescribed combination.

TREATMENT PATTERNS DURING THE 12 MONTHS FOLLOWING DIAGNOSIS

Over the 12-month follow-up period, polypharmacy increased

The number of patients prescribed **1 medication** decreased

Baseline (n=1461) **17%**

12 months (n=949) **10%**

Patients prescribed **≥2 medications** increased

Baseline (n=1461) **83%**

12 months (n=949) **90%**

The top 5 most common medication class journeys from baseline to first change or 12 months, by medication class (n=1461):

Baseline	First change or treatment at 12 months	
Antidepressants	Antidepressants	9%
Second-generation antipsychotics, antidepressants	Second-generation antipsychotics, antidepressants	3%
Anxiolytics, antidepressants	Anxiolytics, antidepressants	3%
Antidepressants, mood stabilisers	Antidepressants, mood stabilisers	2%
Antidepressants, anticonvulsants	Antidepressants, anticonvulsants	2%

Within each medication class, patients were commonly prescribed the same drugs, with the most common treatments being:

Antidepressants:		Second-generation antipsychotics:		Mood stabilisers:	
Sertraline	6%	Quetiapine	22%	Lamotrigine	25%
Fluoxetine	5%	Aripiprazole	19%	Gabapentin	15%
Citalopram	5%			Valproate	7%

ASSOCIATION BETWEEN SYMPTOMS AND TREATMENTS

- Patients with symptoms of emotional dysregulation at baseline had an increased odds of ~16% to be prescribed mood stabilisers at baseline or within 12 months of follow-up compared with patients with no suicidal and emotional dysregulation symptoms (adjusted odds ratio [95% confidence interval][a]: 1.16 [1.01, 1.32]; p=0.04)
- Of the symptoms analysed, patients with symptoms of suicidal attempt/self-injury received the longest continuation treatment of antidepressants, stimulants, SGAs and substance use drugs (**Table 1**)

[a]The association between clinical phenotypes at baseline and treatment at baseline or during the follow-up period were analysed using a binary logistic regression on treatments prescribed at least once at baseline or within the follow-up period; adjusted odds ratio using variables: clinical global impression severity, ethnicity, race, comorbid attention deficit hyperactivity disorder, comorbid major depressive disorder, comorbid substance use disorder, comorbid anxiety disorder, comorbid other bipolar, comorbid other mood disorder and age.

Table 1. Treatment continuation by symptom class[a]

Symptom class, % (SD)	Anti-depressants (n=1287)	Stimulants (n=229)	Second-generation antipsychotics (n=775)	Substance abuse drugs (n=123)	Mood stabilisers (n=619)
Emotional dysregulation	78.7 (28.9)	70.5 (30.9)	66.9 (33.7)	59.9 (32.7)	68.5 (35.0)
Suicidal intent/ideation	82.4 (27.5)	63.0 (34.3)	72.6 (31.6)	65.9 (37.2)	69.0 (34.3)
Suicidal attempt/ self-injury	84.0 (27.2)	77.9 (32.9)	74.8 (30.5)	70.5 (37.7)	67.8 (34.8)

[a]Data are the mean proportion (%) of the 12-month period that a patient was prescribed medication of a particular class; n numbers indicate the number of patients for each class with ≥12 months of treatment data. SD, standard deviation

ADDITIONAL CONCLUSIONS

1. These US-focused results show that antidepressants, second-generation antipsychotics and mood stabilisers were the most frequently prescribed medications at baseline, which builds on similar findings from older, regional European studies[3,7,8]
2. In the 12 months following diagnosis, the most frequently recorded treatment pathway was a switch from one antidepressant prescription to another
3. Patients with BPD were prescribed multiple treatments at diagnosis, and the likelihood of polypharmacy increased with age. Polypharmacy has also been reported in other BPD studies[7,8]
4. Limitations of the current study include the lack of data regarding pharmacological drugs and the small sample sizes in several of the subgroups. In addition, the reasons for the prescription, including whether they were intended for comorbid conditions, were not documented in the electronic health record

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