Treatment Failure Event Categories Reveal Progressive Increases in Disease and Economic Burden Among Patients with Major Depressive Disorder

EE734

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Introduction

1 Context

Major depressive disorder (MDD) is a prevalent mental health issue globally and in the United States, often characterized by fluctuating episodes of depression and remission.[1] Despite available treatments, many patients do not respond adequately and ~30% fail to achieve remission, contributing to a high clinical and economic burden.[1,2] These patients often experience multiple episodes, higher healthcare resource utilization (HCRU), and higher associated costs.[2]

2 Unmet need

Current approaches to define treatment failure (TF) in MDD based on specific treatment pattern may be inadequate to categorize patients who experienced general treatment change. This limits effective management of disease severity and burden.

3 Study rationale

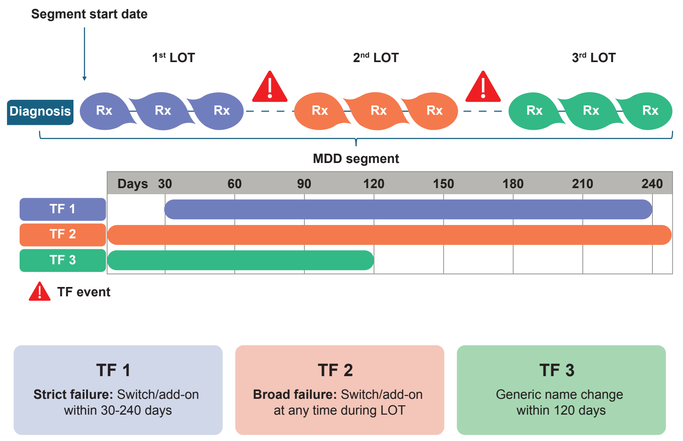
To better understand the association between antidepressant TF status, clinical outcomes, disease severity, and HCRU.

Aim

This study defined disease episodes based on secondary data to mirror the natural course of MDD. Furthermore, it examined disease characteristics, HCRU, and costs at episode level to evaluate whether TF can serve as a proxy for disease severity and to better understand the burden associated with difficult-to-treat depression.

Methods

Patients with MDD (N=203,303) were identified in Optum Clinformatics claims (2012 – 2022). Among 203,303 patients, 229,602 major depressive disorder episodes (MEPs) were identified with mean duration 15.9 months per episode.



LOT, line of treatment; TF, treatment failure.

HCRU and costs were calculated per patient per year (PPPY), stratified by 0, 1, and ≥2 failures.

Key Conclusions

- Higher TF was consistently linked with greater clinical and economic burden: with increasing TF, emergency room visits went up, suggesting a possible association between TF and acute care needs.
- Time-to-failure was shorter after ≥2 failures, likely reflecting a more severe or difficult to treat illness.
- Consistent trends were observed using TF definitions 2 and 3.

Results

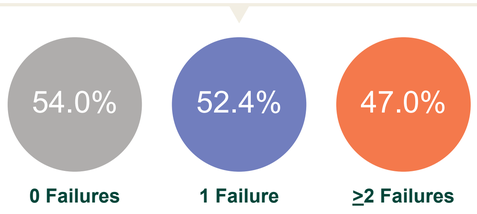
When analyzing baseline clinical characteristics by number of TFs under definition 1 (switch/add-on within 1–8 months), results suggest a shift in comorbidity burden, with patients experiencing ≥2 failures exhibiting the highest prevalence of psychiatric and co-morbid conditions (detailed results are shown in **Table 1**).

Table 1. Baseline* Clinical Characteristics (TF Definition 1†)

Variable	Total population (N=229,602)	0 TF Event (N=183,303)	1 TF Event (N=24,355)	≥2 TF Events (N=21,998)	*P*-value¶
Psychiatric diagnosis					
Anxiety	12.7%	12.1%	14.8%	15.6%	0.049
Depression†	10.0%	9.4%	11.2%	14.0%	<0.001
Adjustment disorder	6.4%	6.3%	6.7%	6.9%	<0.001
Developmental disorder	0.5%	0.5%	0.6%	0.4%	>0.05
Psychoses	0.1%	0.1%	0.1%	0.1%	0.462
Non-psychiatric diagnosis‡					
Hypertension§	16.0%	15.0%	18.9%	21.3%	<0.001
Obesity	7.6%	7.2%	8.3%	9.3%	<0.001
Diabetes§	7.1%	6.5%	8.6%	10.0%	<0.001
Chronic pulmonary disease	6.9%	6.4%	8.5%	9.9%	<0.001
Diabetes	4.8%	4.5%	5.9%	6.6%	<0.001

*Baseline defined as 12 months before the first MDD diagnosis; †switch/add-on within 1-8 months; ‡Elixhauser diseases; §Uncomplicated; ¶*P*-values were calculated using the chi-squared test and adjusted for multiple comparisons with the Bonferroni correction; TF, treatment failure.

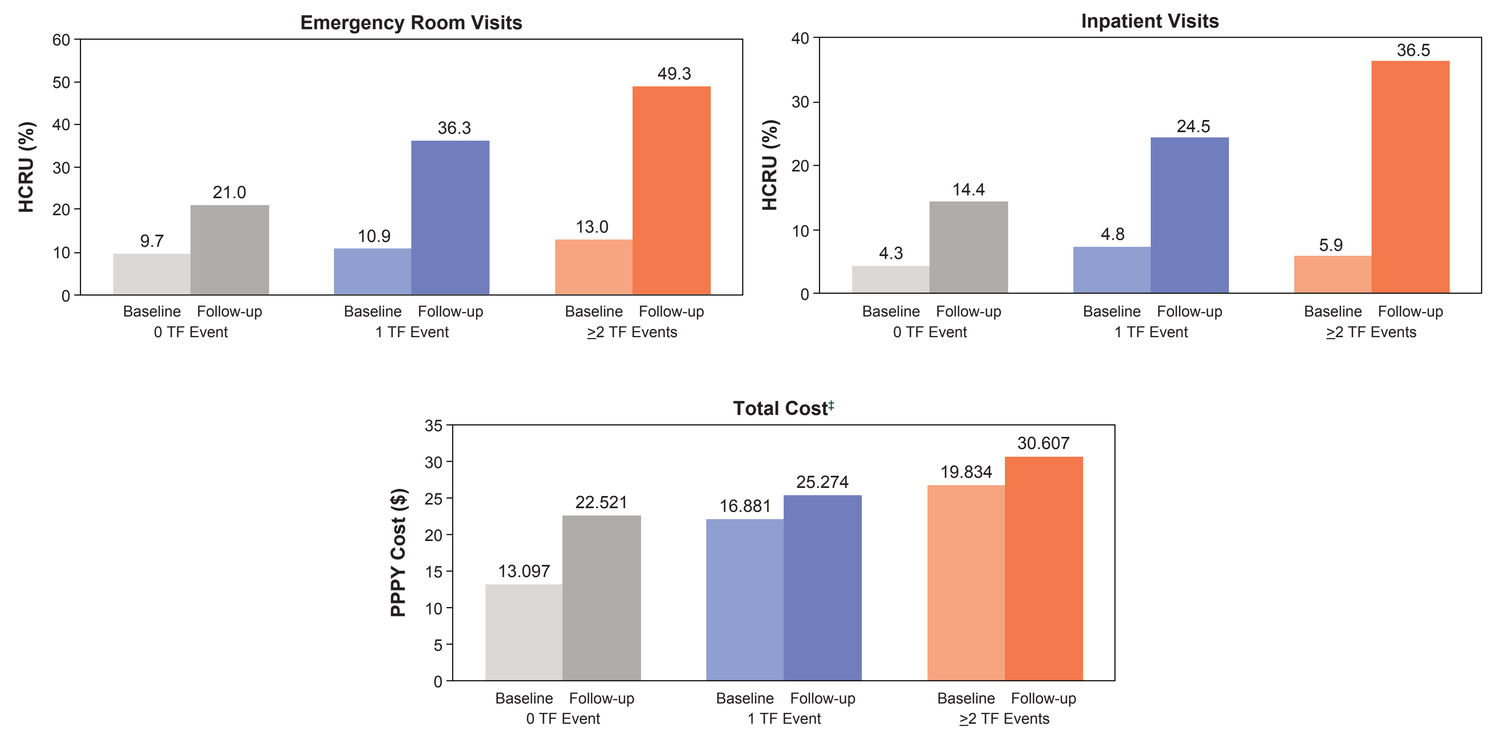
Patients with more TF events were less likely to start antidepressant treatment at the beginning of a new episode. Specifically, for TF1, antidepressant initiation occurred in 54.0%, 52.4%, 47.0% of episodes for 0, 1, and ≥2 failures, respectively.



Among failure episodes, the time to failure was shorter in patients with ≥2 failures compared to those with only 1, with the mean (SD) of time to failure being 251.8 (331.3) days for failure 1 vs. 218.8 (290.2) days for ≥2 failures.

Consequently, emergency room visits, and total PPPY costs increased progressively across failure categories during follow-up (detailed results are shown in **Fig. 1**). Psychotherapy use also increased with failure frequency.

Fig. 1. HCRU* and PPPY Costs of MDD Population at Baseline vs. Follow-Up by TF Category (Definition 1†)



*Outpatient patients results are not presented as no distinct patterns were observed
†Definition 1: switch/add-on within 1-8 months
‡The study excluded patients who were in the 99th percentile or higher for total cost to reduce the impact of outliers that could potentially skew the results.
Baseline: 12 months before the first MDD diagnosis.
Follow-up: from the first diagnosis date until the end of the follow up period.
HCRU, healthcare resource utilization; MDD, major depressive disorder; PPPY, per-patient-per-year; TF, treatment failure.

Abbreviations

HCRU, healthcare resource utilization; LOT, line of treatment; MDD, major depressive disorder; MEP, major depressive disorder episode; PPPY, per patient per year; TF, treatment failure.

References

1. Zhdanava M, *et al*. *J Clin Psychiatry*. 2021;82(2):20m13699.
2. Li G, *et al*. *PLoS ONE*. 2020;15(9):e0238843.

Disclosures

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