

Depression Severity Among Pregnant Patients by Antidepressant Use During Pregnancy

Lyuba Popadic, Francesca Devine, Yuqin Wei — Komodo Health, New York, NY, and San Francisco, CA

Introduction

- Depression and anxiety are common conditions among adult women, with prevalences of 8.6% and 23.4%, respectively.¹
- Poor depression management has been associated with adverse pregnancy outcomes, such as preterm birth and low birth weight, with more severe depression having higher risks.²
- Given the broad exclusion of pregnant patients from clinical trials, limited evidence exists on the efficacy of antidepressant treatments (ADTs) during pregnancy.

Objective

- To describe maternal characteristics and depression severity among women with depression or anxiety by ADT discontinuation vs. maintenance during pregnancy.

Methods

Study Design

- This retrospective cohort study used closed claims from the Komodo Research Dataset, a Komodo Health data schema designed for RWE and HEOR studies, linked to survey results from Komodo Clinical Observations, patient-derived clinical variables curated by Komodo Health, from January 2016 through August 2023.
- The pregnancy start date, calculated using the earliest gestational age claim, was established as the *index date*.
- The Patient Health Questionnaire-9 (PHQ-9), which has been validated among pregnant populations,³ was used to assess depression severity during the 365 days before (baseline) and after (follow-up) index. Patient characteristics were assessed during the baseline period and on index date.

Inclusion/Exclusion Criteria

- Female with ≥1 pregnancy diagnosis, ≥1 gestational age claim, and known end of pregnancy event within 42 weeks of index date during identification period (same as data period)
- Anxiety or major depressive disorder (MDD) ICD-10-CM diagnosis prior to the index date (exclusive)
- ≥1 antidepressant outpatient pharmacy dispensing claim in the 365 days prior to index (baseline period)
- ≥18 years old as of the index date
- 365 days of medical and pharmacy continuous enrollment prior to index (exclusive) and after index (inclusive) (follow-up period)
- ≥1 PHQ-9 response in both the baseline and follow-up periods
- ≥14 days between index and end of pregnancy event
- Patients were stratified based on whether their baseline ADT was discontinued prior to the end of pregnancy

Key Study Variables

- Demographics and clinical characteristics
- Depression severity based on PHQ-9 scores

Results

- A total of 1,234 patients met the eligibility criteria:
 - 338 (27.4%) patients maintained their baseline ADT throughout pregnancy.
 - 896 (72.6%) patients discontinued their baseline ADT before the end of pregnancy.

Figure 1. Sample Selection



Table 1. Patient Characteristics

	Maintained patients (N = 338)	Discontinued patients (N = 896)
Age (years), mean (SD)	32.2 (6.7)	29.4 (6.7)
Charlson Comorbidity Index, mean (SD)	0.3 (0.8)	0.3 (0.8)
Race/ethnicity, n (%)		
White	135 (71.1)	352 (55.1)
Hispanic or Latino	33 (17.4)	155 (24.3)
Black or African American	9 (4.7)	75 (11.7)
Asian or Pacific Islander	2 (1.1)	28 (4.4)
Other	11 (5.8)	29 (4.5)

* Race proportions were reported out of patients with known race information (maintained patients: N = 190; discontinued patients: N = 639).

- A higher proportion of patients that discontinued their ADT use had moderate to severe depression (PHQ-9 score ≥10) vs. patients that maintained in both the baseline (54.4% vs. 42.3%) and follow-up periods (39.3% vs. 31.4%).

Figure 2. Payer Distribution Upon Pregnancy Start by ADT Continuation During Pregnancy

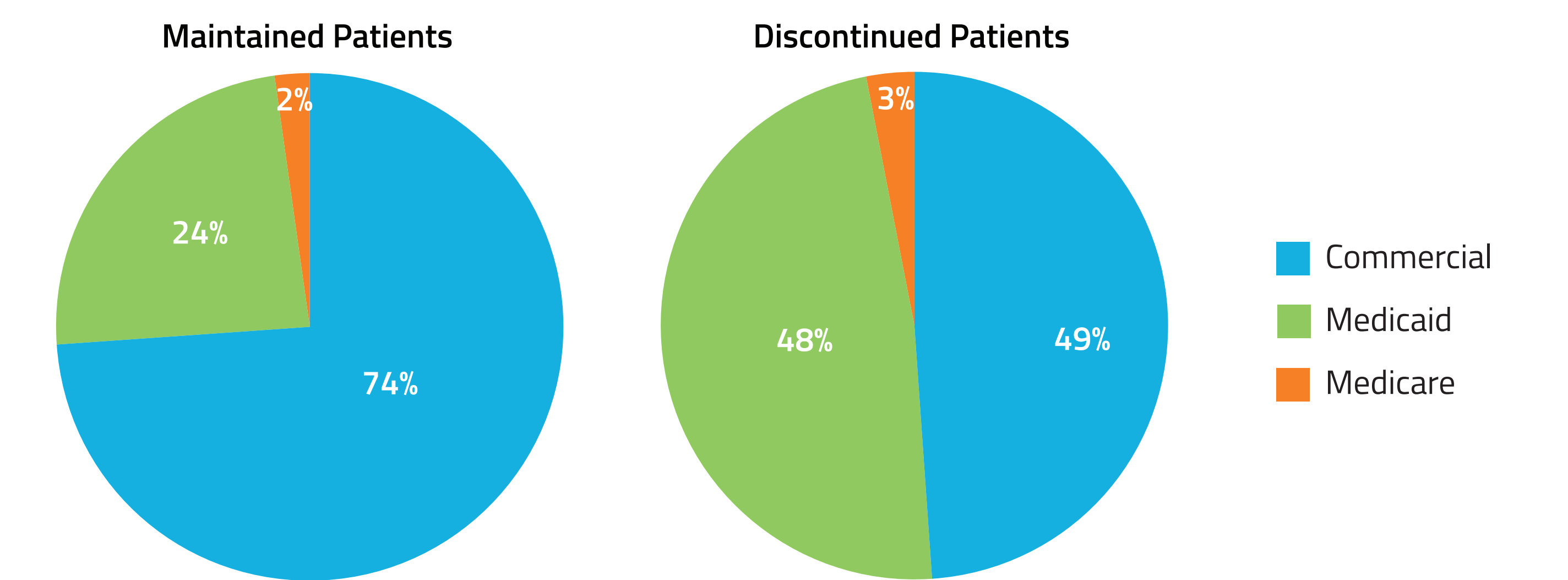
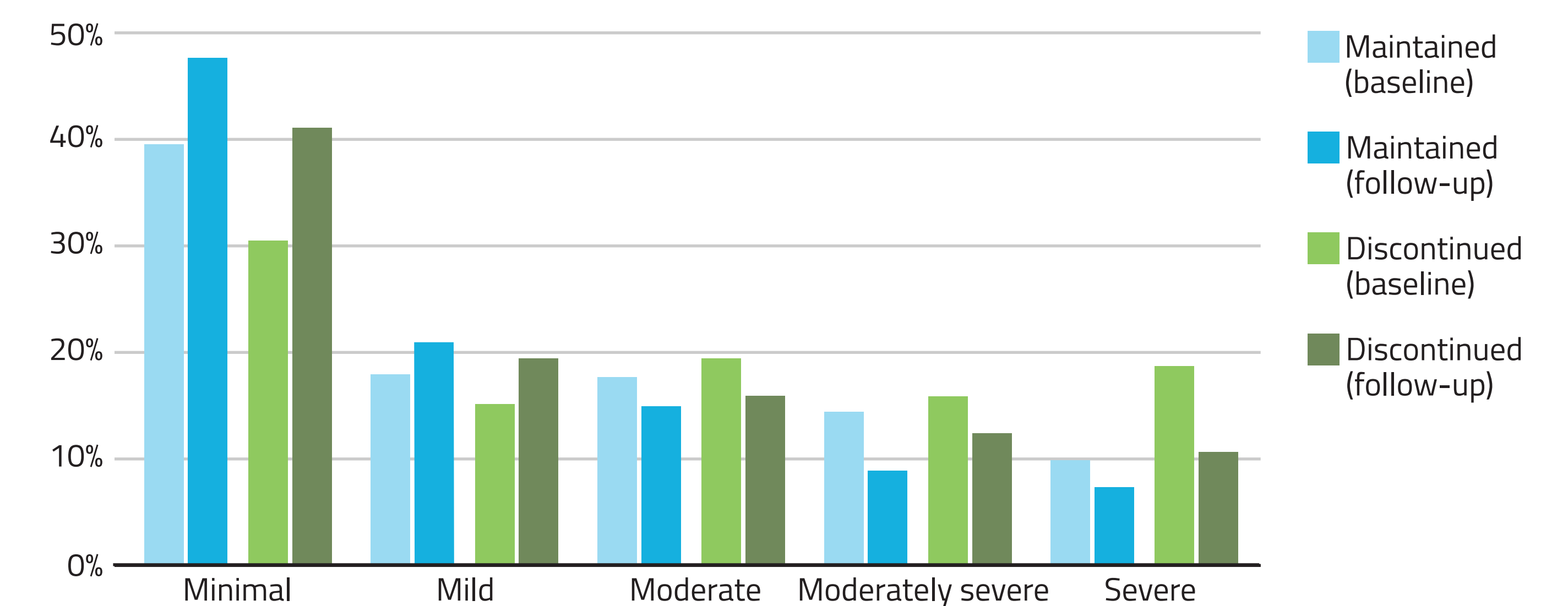


Figure 3. Depression Severity During Baseline and Follow-Up by ADT Continuation During Pregnancy



* The following PHQ-9 scores were used to define level of depression: Minimal, 0-4; Mild, 5-9; Moderate, 10-14; Moderately severe, 15-19; Severe, 20-27.⁴

Conclusion

- Patients who maintained ADT use had lower depression severity both before and after pregnancy start than those who discontinued.
- Regardless of whether ADT use was discontinued, patients in both cohorts experienced a decrease in depression severity during follow-up, though a larger decrease was observed among patients who discontinued ADT.
- Additional research should be conducted to identify factors driving these differences and further investigate the overall decrease among patients who discontinued.

References

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