Healthcare Resource Utilization in Patients with Co-Occurring Generalized Anxiety Disorder and Major Depressive Disorder: A Real-World Claims Analysis

EPH14

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Introduction & Objectives

- Generalized anxiety disorder (GAD) and major depressive disorder (MDD) are chronic mental health conditions that commonly co-occur and have substantial disease burdens.[1,2] However, the relationship between symptom severity and real-world healthcare resource utilization (HCRU) among patients with GAD and/or MDD is not fully characterized.
- Many patients experience persistent symptoms and require ongoing healthcare engagement for diagnosis, monitoring, and treatment of both symptoms and associated comorbidities.[3] Patients with comorbid GAD and MDD often experience more severe, persistent symptoms compared with GAD or MDD alone, which may exacerbate the burden on HCRU.[1,3]
- Characterizing HCRU in patients with GAD, MDD, and comorbid GAD and MDD, would clarify burden and unmet clinical need in these populations.

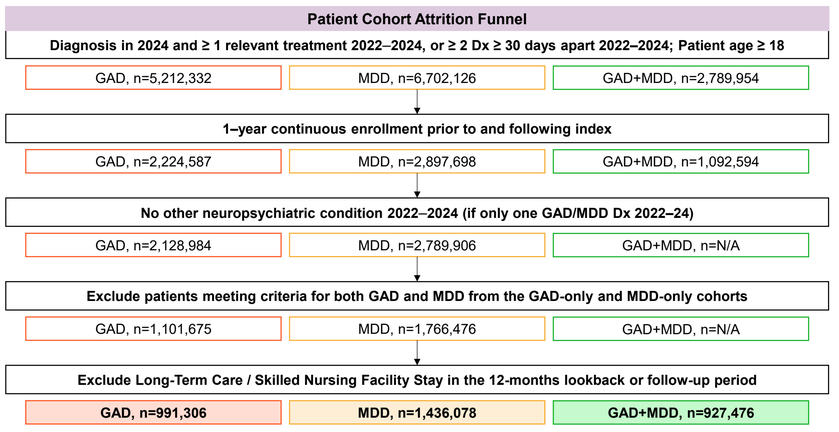
Objectives

To compare 12-month HCRU among adults diagnosed with GAD only, MDD only, or co-occurring GAD and MDD.

Methods

- This retrospective analysis used United States (US) claims data (Komodo; 2022–2025).
- The index date was the first encounter of a GAD or MDD diagnosis in 2024.
- Patients were assigned to mutually exclusive GAD, MDD, or GAD+MDD cohorts. For each cohort, eligibility required either (a) the respective International Classification of Diseases, 10th Revision (ICD-10) diagnosis in 2024 and ≥1 relevant treatment claim during 2022–2024, or (b) ≥2 respective diagnosis codes recorded ≥30 days apart during 2022–2024 (Figure 1). Patients with a single relevant diagnosis from 2022–2024 and with other neuropsychiatric condition diagnoses were excluded.
- All patients were aged ≥18 years and continuously enrolled for 12 months before and after the index date, with no long-term care / skilled nursing facility stay during this period.
- Demographics and clinical characteristics were assessed over a 12-month lookback period.
- HCRU was assessed 12 months post-index and included the mean number of encounters per patient among those with ≥1 visit, and the proportion of patients with ≥1 mental health-related visit.

Figure 1: Attrition/cohort flow diagram



Results

Baseline Characteristics

The cohorts were mostly comprised of females (67–72%) (Table 1). On average, patients in the GAD (46.6 years) and GAD+MDD (45.5 years) cohorts were younger than those in the MDD cohort (57.1 years). Medicare coverage was most common in the MDD cohort, whereas commercial insurance predominated in the GAD and GAD+MDD cohorts.

Table 1: Baseline characteristics across cohorts

	GAD (n=991,306)	MDD (n=1,436,078)	GAD+MDD (n=927,476)
Age (Mean), Years	46.6	57.1	45.5
Gender, Female, n (%)	668,587 (67.4)	962,842 (67.1)	662,990 (71.5)
Payer, n (%)			
Commercial	596,291 (60.2)	508,641 (35.4)	479,333 (51.7)
Medicaid	121,228 (12.2)	185,347 (12.9)	168,360 (18.2)
Medicare	216,662 (21.9)	668,146 (46.5)	225,909 (24.4)
Unknown	57,125 (5.8)	73,994 (5.1)	53,793 (5.8)

All-cause HCRU

HCRU was highest in the GAD+MDD patient cohort across all settings compared with GAD and MDD alone (Table 2).

Table 2: Mean encounters for all cause HCRU among patients with ≥1 visit

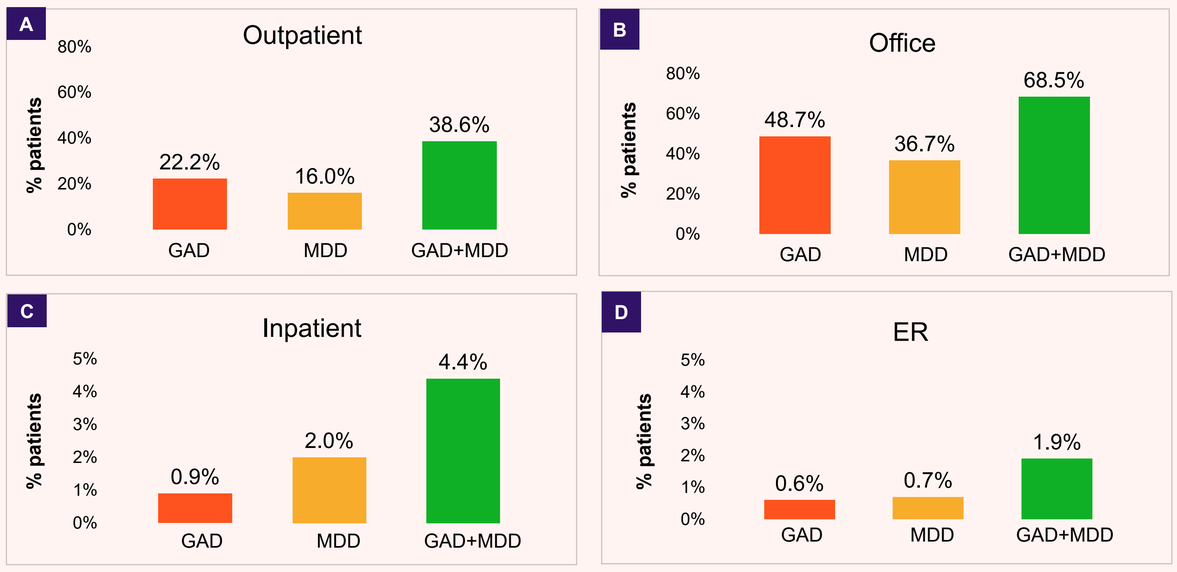
Mean (SD) visits	GAD	MDD	GAD+MDD
Outpatient	8.4 (14.0)	9.0 (16.0)	11.8 (17.8)
Office	15.1 (16.2)	15.0 (15.9)	19.6 (20.1)
Inpatient	2.6 (5.3)	2.4 (4.6)	3.4 (6.2)
ER	2.1 (2.9)	2.1 (2.8)	2.6 (3.9)

Proportion with ≥1 visit (GAD/MDD/GAD+MDD): outpatient, 82%/83%/87%; office, 96%/96%/96%; inpatient, 9%/13%/15%; ER, 23%/28%/31%.

Mental Health-related HCRU

The proportion of patients with ≥1 mental health-related visit was consistently highest in GAD+MDD across settings, compared with GAD and MDD (Figure 2).

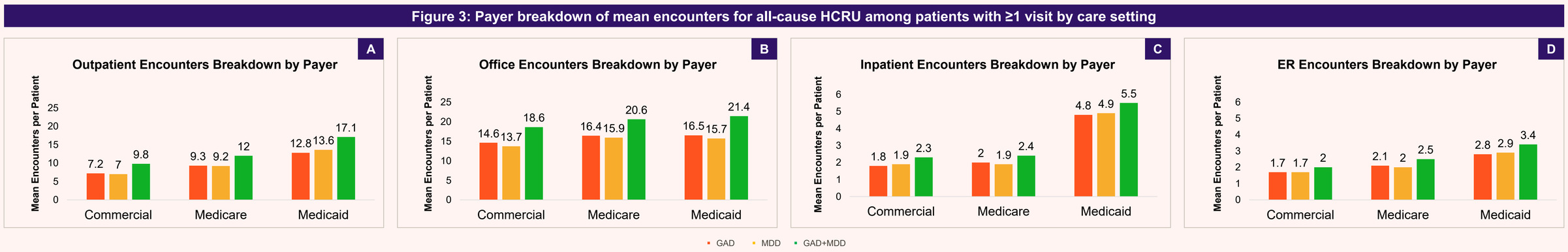
Figure 2: Proportion of patients with ≥1 mental health-related visit by setting for (A) outpatient, (B) office, (C) inpatient, and (D) ER visits



HCRU by Payer Type

- Across all payer types, patients with GAD+MDD had the highest mean number of encounters in every care setting compared with GAD or MDD alone (Figure 3).
- Mean encounters were highest among Medicaid enrollees across all cohorts and care settings, and highest overall in the GAD+MDD Medicaid cohort.

Figure 3: Payer breakdown of mean encounters for all-cause HCRU among patients with ≥1 visit by care setting



Discussion

- Patients with co-occurring GAD+MDD diagnoses demonstrated greater overall HCRU burden than those with either condition alone, highlighting the substantial burden associated with this psychiatric comorbidity.
- The association between mental health comorbidity and HCRU was consistent across payer types, with greater all-cause utilization among patients with GAD+MDD.
- While the MDD cohort had a larger proportion of Medicare beneficiaries than the other cohorts, HCRU was generally highest among Medicaid patients, indicating that healthcare utilization patterns may not be explained by age differences alone.
- The proportion of patients with ≥1 mental health-related encounter was also highest in the GAD+MDD cohort across all care settings, indicating these patients use mental health-related services more frequently in addition to greater overall healthcare engagement.
- As this was a descriptive analysis, differences between cohorts were not adjusted for potential confounders; further adjusted analyses accounting for these differences could be beneficial.

Limitations

A limitation of this study is that claims data do not capture disease severity, symptom burden, or the underlying reasons for healthcare encounters. Diagnoses and healthcare encounters may be subject to coding errors or misclassification.

Conclusion

Co-occurring GAD and MDD was associated with greater all-cause and mental health–related HCRU than either condition alone, a pattern consistent across care settings and payer types. These findings underscore the need for care strategies that address both conditions together.

Abbreviations

Dx, diagnosis; ER, emergency room; GAD, generalized anxiety disorder; GAD+MDD, generalized anxiety disorder and major depressive disorder; HCRU, healthcare resource utilization; ICD-10, International Classification of Diseases, 10th Revision; LB, lookback; LF, look-forward; MDD, major depressive disorder; N/A, not applicable; SD, standard deviation; US, United States.

References

1. Terlizzi & Zablotsky. Natl Health Stat Rep. 2024. 2. Jegede et al. J Nerv Ment Dis. 2023;211:355-361. 3. Armbrecht et al. J Multidiscip Healthc. 2021;14:887-896.

Disclosures

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