Retrospective analysis of antidepressant utilization in a commercial health plan population

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Background

- Major depressive disorder (MDD) is a condition that affects millions of people, negatively impacting activities of daily living and contributing to significant healthcare costs. From 2005 to 2018, the prevalence of major depressive disorder in the U.S. increased from 13.7 to 17.5 million people.[1]
- Studies have found an increased prevalence and worse prognosis of depression in patients from historically marginalized groups and with limited education, lower income, and other socio-demographic vulnerabilities.[2]
- Antidepressant adherence is a common concern as patients are known to prematurely discontinue their antidepressants if they start feeling better. It has been suggested that there is an association between antidepressant adherence and socio-demographic factors, such as age, income level, gender, and race/ethnicity.[3] In particular, race/ethnicity and gender seem to have the greatest impact on antidepressant adherence rates.[4]
- CDC surveys during 2019-2021 found that rates of antidepressant utilization in the US are highest among patients of female sex, non-Hispanic white adults, and patients age 18-44 years.[5]

Objectives

- Describe the relationship between socio-demographic profiles and:
  - Antidepressant adherence
  - Antidepressant utilization

Methods

- An index date was created for the first antidepressant claim between 1/1/21 and 12/31/22 if the member had no previous antidepressant claim in the 365 days prior to the index claim.
- Members with index prescriptions were considered utilizers if they were continuously enrolled 365 days before and after the index antidepressant claim.
- Non-utilizers were defined as members continuously enrolled in 2021 and 2022 who did not have ≥1 antidepressant claim.
- Medication adherence was assessed by proportion of days covered (PDC) for 365 days from the index date for members who did not change antidepressant therapy for 365 days following the index date.
- Socio-demographic profiles of adherent members (PDC>80%) were compared to non-adherent members, and utilizers were compared to non-utilizers.
- Members were grouped by race, age (generation), and gender based on self-reported characteristics.
- Social vulnerability (socioeconomic status, minority status/ language, and overall) was determined using census data at the census tract level. Members were assigned to a least vulnerable (bottom quartile) and a most vulnerable (top quartile) group based on the density of vulnerable households within the census tracts they reside in. The two middle quartiles were assigned to a moderately low vulnerability and moderately high vulnerability group, respectively.
- A chi-square test was used to determine significance.

Results

Figure 1. Percentage of Adherent Members (PDC>80%) by Social Vulnerability Index

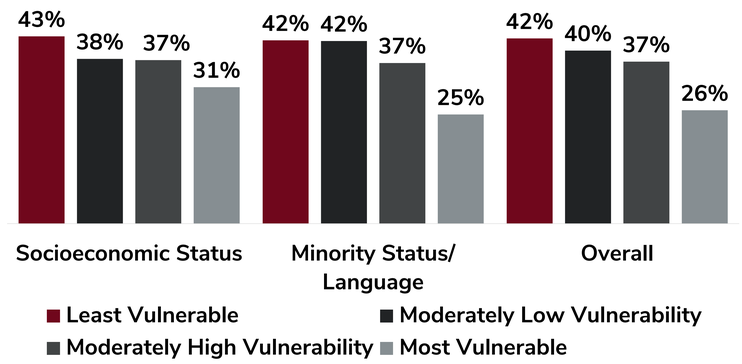


Figure 2. Percentage of Adherent Members (PDC>80%) by Race

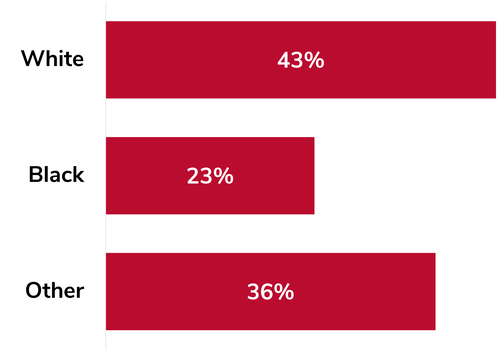


Figure 3. Percentage of Adherent Members (PDC>80%) by Generation

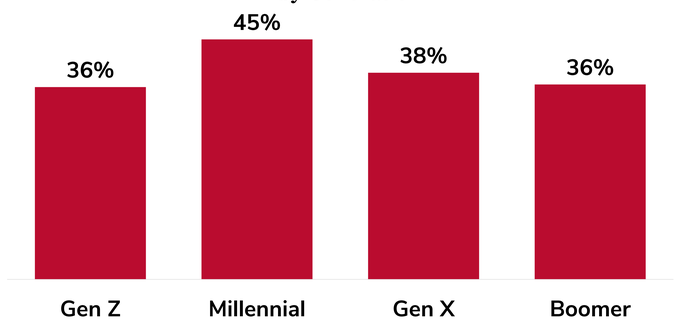


Figure 4. Percentage of Antidepressant Utilizers vs. Non-Utilizers by Race

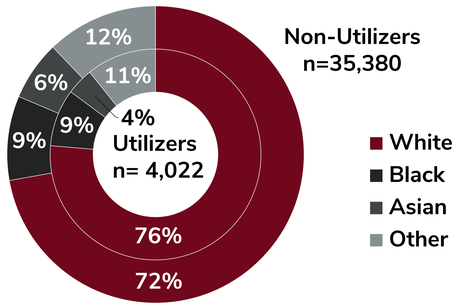


Figure 5. Percentage of Antidepressant Utilizers vs. Non-Utilizers by Generation

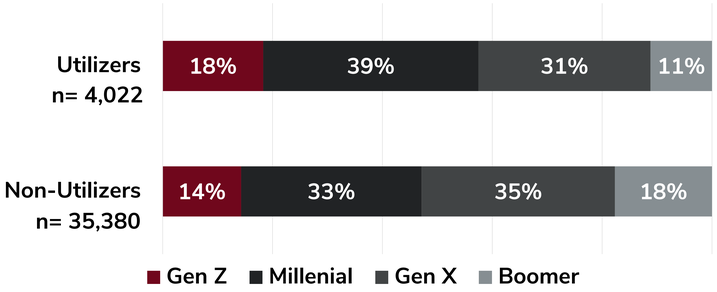
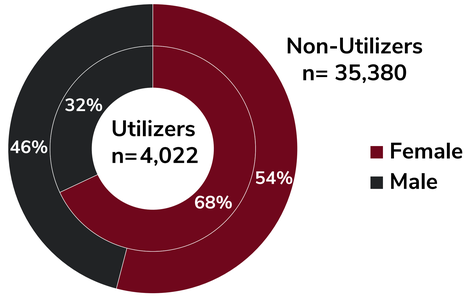


Figure 6. Percentage of Antidepressant Utilizers vs. Non-Utilizers by Gender



Discussion

- The percentage of new starts on antidepressant therapy who were adherent (PDC>80%) was lowest in the top quartile of the social vulnerability index ($p<0.05$). This aligns with previous research suggesting that patients who are socioeconomically disadvantaged have worse treatment prognosis for depression.[2]
- The proportion of adherent members (PDC >80%) was lower in the Black population compared to the white population in this study ($p<0.05$), consistent with previous literature identifying race/ethnicity as a predictor of antidepressant early adherence.[3]
- Previous literature has found that older age groups are more likely to refill prescriptions compared to 18–29-year-olds.[3] However, the only statistically significant difference found in this study was comparing the Gen Z and Millennial populations ($p<0.05$). The study's focus on new starts could have affected these results, as older generations are more likely to be established on therapy.[6,7] Further studies are needed to understand these differences.
- Initiation of antidepressant therapy was disproportionately higher in the white population ($p<0.05$), which is consistent with previous research.[8] Given the association between membership in a historically marginalized group and an increased prevalence of depression, this raises the question of whether patients with the most need are less likely to be treated.[9]
- Per the CDC, rates of antidepressant use increased during 2019-2021 in patients age 18-44.[5] The study found higher rates of members initiating therapy in the Millennial and Gen Z populations compared to older generations ($p<0.05$).
- Female sex is associated with higher rates of antidepressant utilization in national surveys.[9] Consistent with this finding, 68% of members starting therapy in this study were female ($p<0.05$).

Limitations

- The number of members in each social vulnerability and socio-demographic group with a diagnosis of MDD was not assessed, making direct comparisons to previous research more difficult.
- Utilizing census tracts to determine social vulnerability does not allow for identification of individual member characteristics.
- Some medication classes (i.e., SSRIs, SNRIs, TCAs) have alternative uses such as anxiety, insomnia, and neuropathic pain.

Conclusions

- The percentage of adherent members was lowest in the top quartile of the social vulnerability index.
- The proportion of adherent members was lower in the Black population compared to the white population.
- Compared to non-utilizers, new starts on antidepressants were more likely to be female, white, and from a younger population.

References

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