

Mental health medication and service utilization in a commercial health plan: a descriptive analysis of trends and sociodemographic factors

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Background

- Anxiety and depression have considerable physical, social, and financial impacts on individuals. Effective treatment remains complex as individual response is unpredictable and most patients require at least one therapy change.¹
- Previous publications and research surveys have identified the COVID-19 pandemic and socio-political unrest as contributing to increased psychological distress in the United States. Female, racial/ethnic minority, and young adult populations were found to have experienced greater psychological distress as a result of the COVID-19 pandemic.²⁻⁴
- Despite the increased psychological distress and mental health burden that has been reported in historically marginalized groups, there are significant racial and ethnic disparities in the use of antidepressants.⁵⁻⁷ Between 2015 and 2018, the highest percentage of antidepressant use was in female, non-Hispanic white, and older populations.⁷
- Healthcare inequities originating from economic instability and historically marginalized status have highlighted the importance of addressing social determinants of health.⁸

Objectives

- For the utilization of mental health medications and/or services for anxiety and depression in a commercially insured population:
 - Compare trends over time
 - Describe relationships with sociodemographic factors

Methods

- Members were included in the analysis if they were adults continuously enrolled for a given year between 2018-2021.
- Percentages of utilizers in each category were compared over time. Utilizers were categorized as:
 - Medications (Meds)** – Having ≥1 pharmacy claims for a ≥30-day supply of an antidepressant (i.e., selective serotonin reuptake inhibitors [SSRIs], serotonin and norepinephrine reuptake inhibitors [SNRIs])
 - Services (Serv)** – Having ≥1 medical claims for a mental health service (i.e., psychotherapy, hypnotherapy, electroconvulsive therapy [ECT])
- The at-risk population for anxiety and depression was determined based on responses to Generalized Anxiety Disorder 2-item (GAD-2) and Patient Health Questionnaire-2 (PHQ-2) within an optional personal health assessment (PHA). Analysis was limited to members with recorded responses and continuous plan enrollment in 2021.
- Members were grouped by gender, race, and age (generation) based on self-reported characteristics.
- Subjects were grouped by poverty, no high school diploma, and minority status using census tracts. Members living at addresses in census tracts within the top or bottom 25% in respect to density of vulnerable households were assigned to the high density and low density groups, respectively. The middle two quartiles (25-75%) were combined to establish the moderate density population.
- Distribution of sociodemographic factors was compared between utilizers, the at-risk population, and the overall health plan population for the calendar year 2021.
- A chi-square test was used to determine significance.

Results

Figure 1. Percentage of Members Utilizing Medications vs. Medications and/or Services

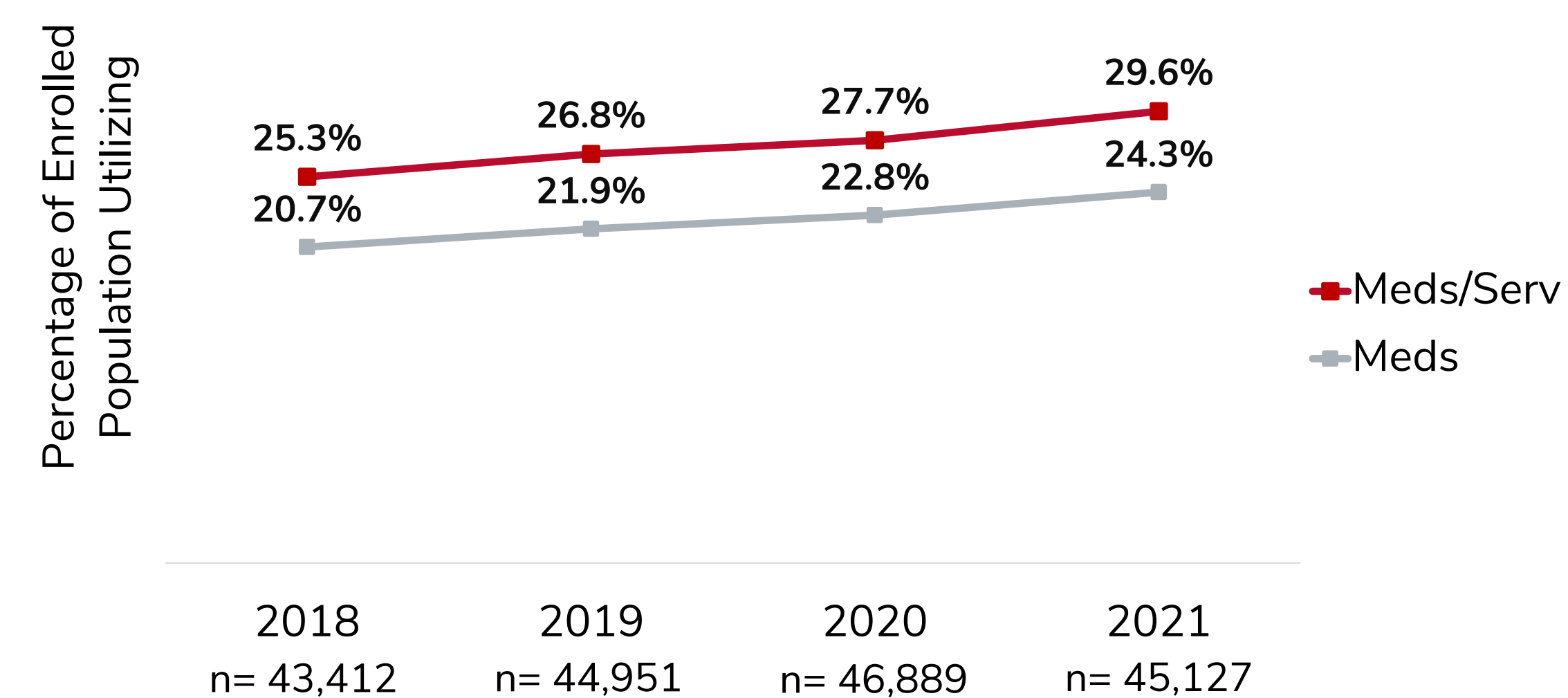


Figure 2. Medication and/or Service Utilizers by Gender in 2021

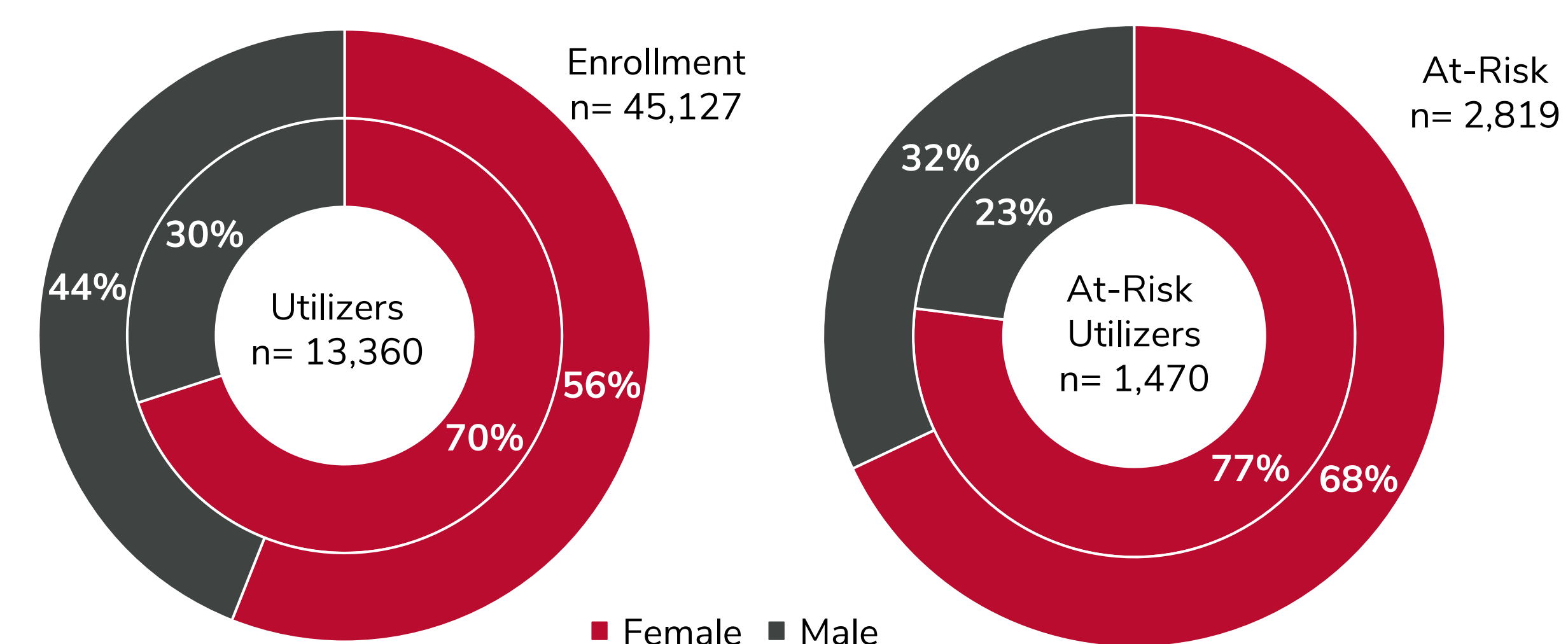


Figure 3. At-Risk vs. At-Risk Utilizers by Social Vulnerability in 2021

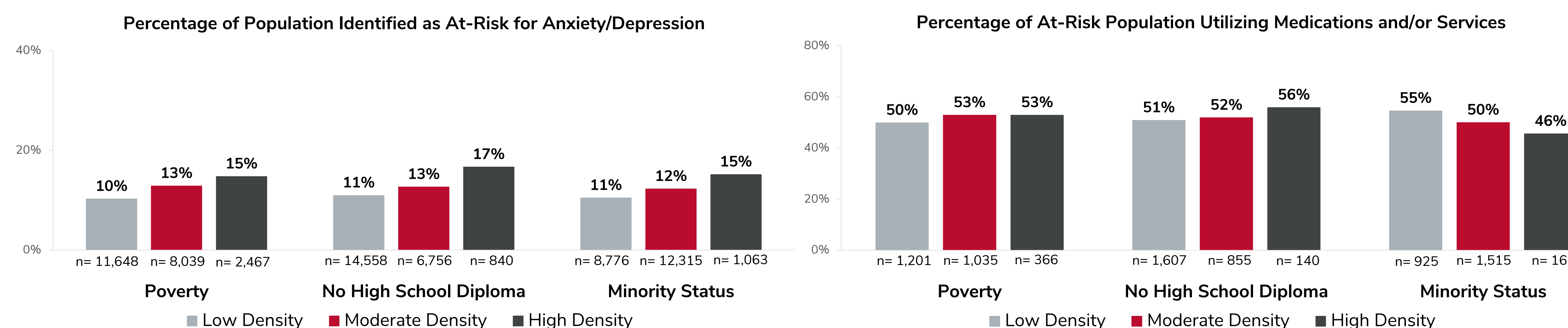


Figure 4. Medication and/or Service Utilizers by Race

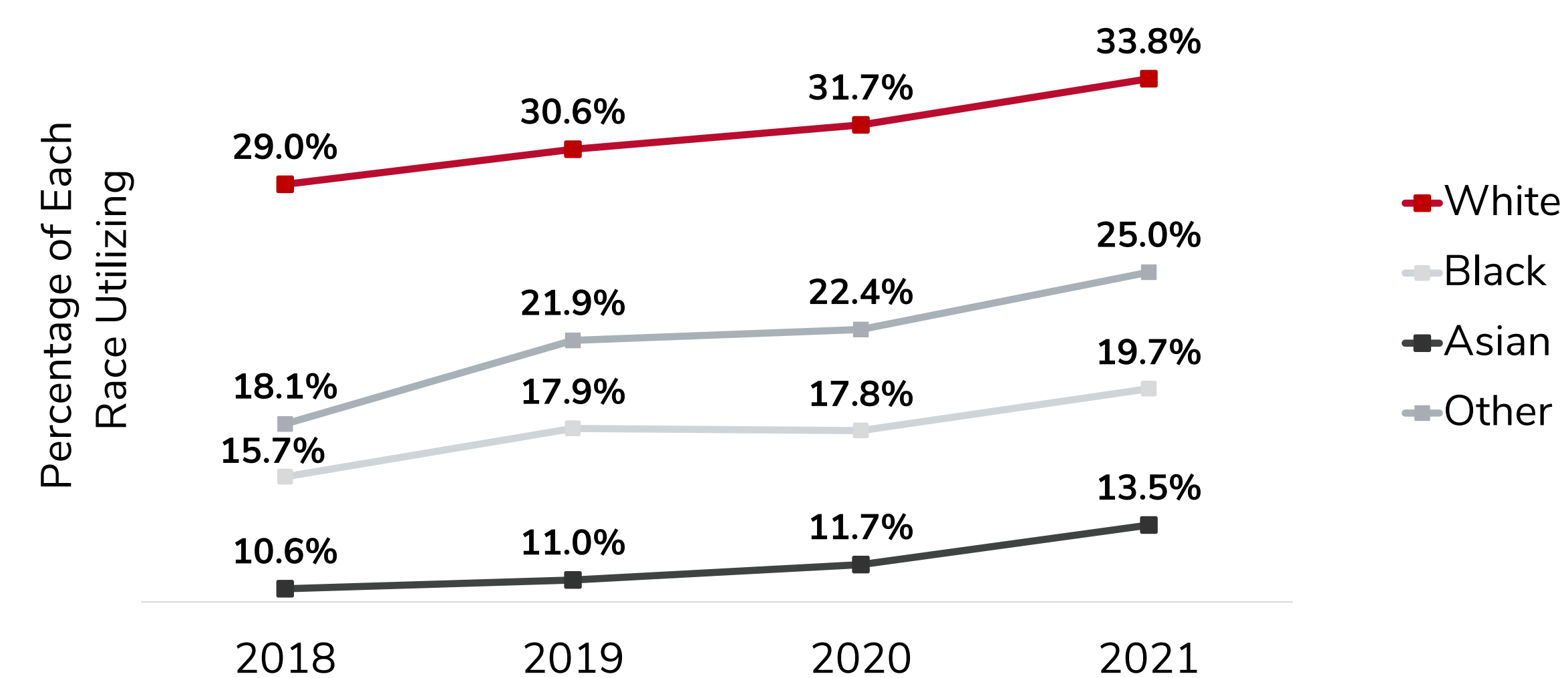


Figure 5. Medication and/or Service Utilizers by Race in 2021

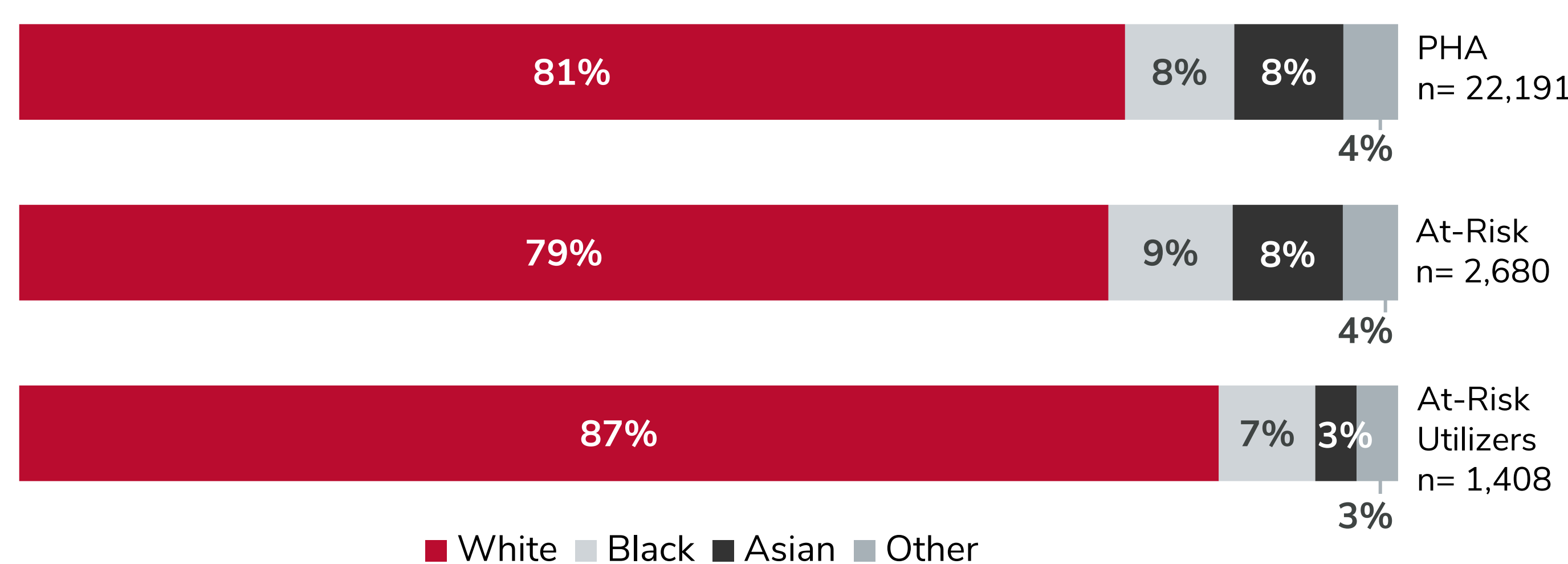


Figure 6. Medication and/or Service Utilizers by Generation

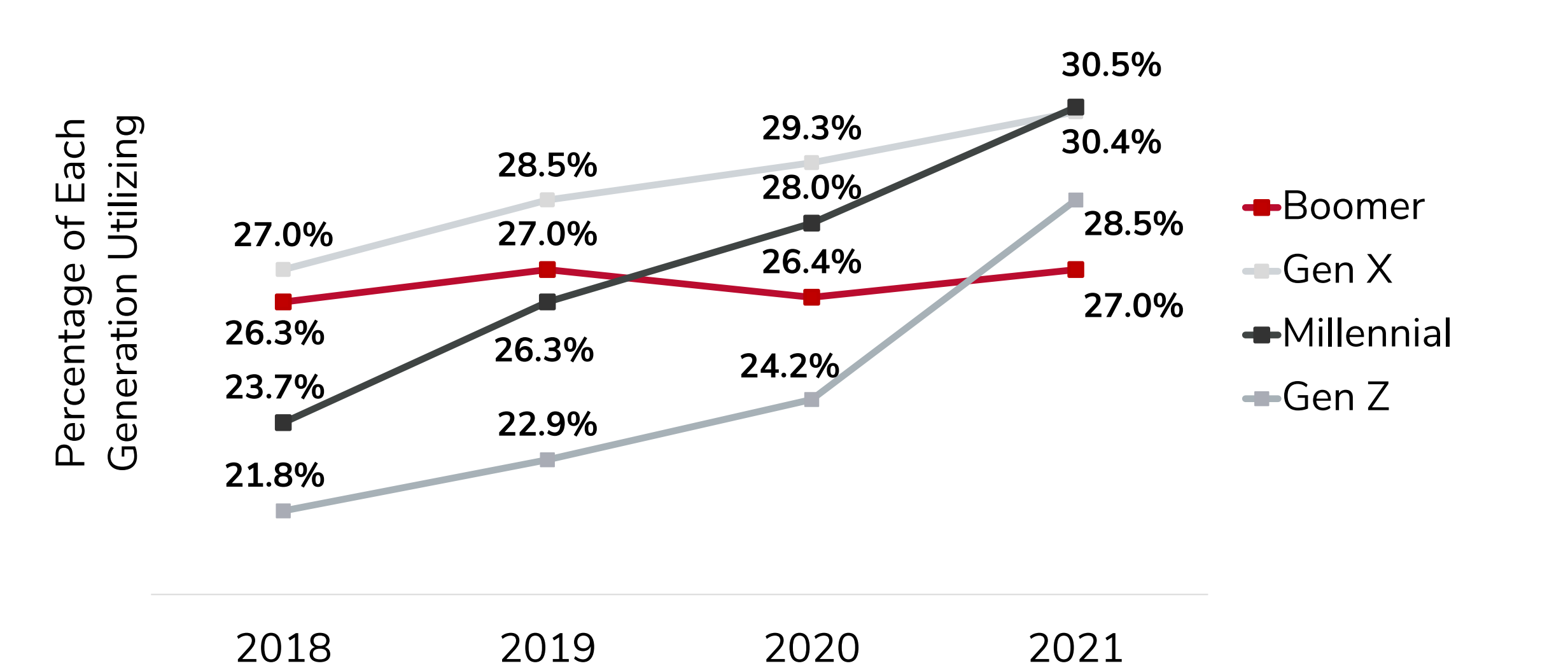
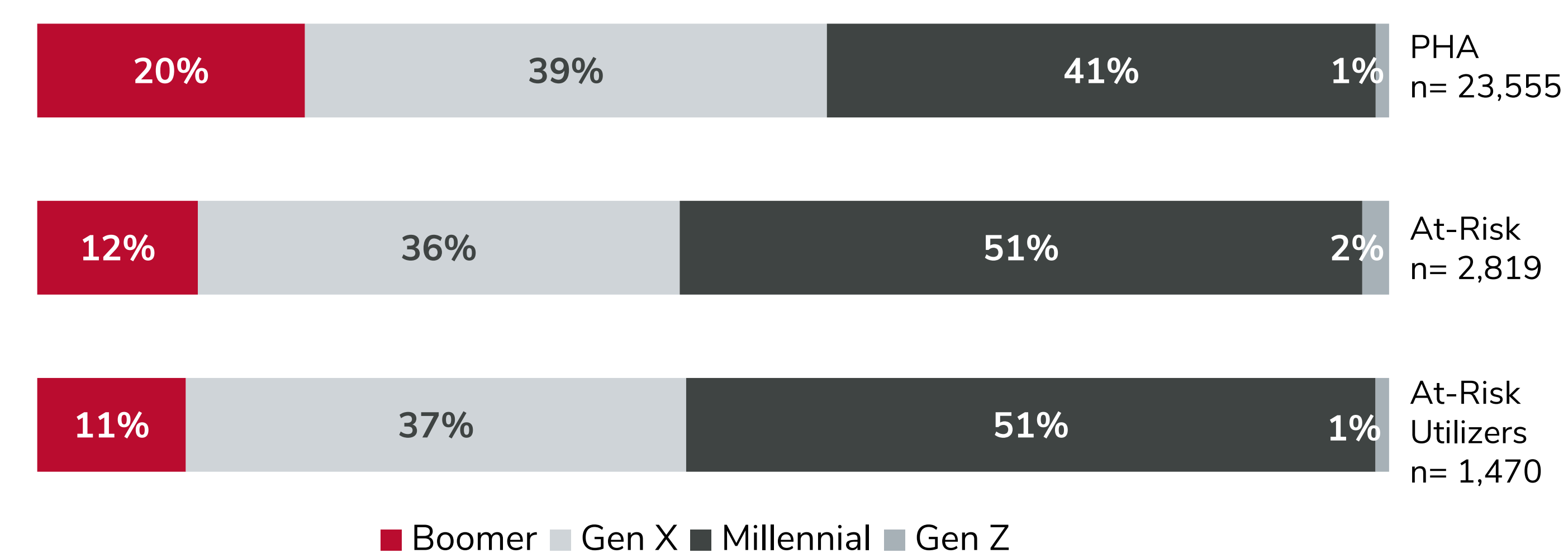


Figure 7. Medication and/or Service Utilizers by Generation in 2021



Discussion

- Previous literature found that antidepressant use increased during 2009-2018.⁷ This trend appears to have continued based on the 17.4% increase in members utilizing medications and/or services over the study period. The population utilizing medications and/or services had comparable increases.
- Significantly more female utilizers existed in the overall and at-risk population in 2021 ($p < 0.05$). This aligns with trends documented in the years prior to the outbreak of COVID-19, as well as the greater mental health distress/increase in anxiety and depression diagnosis rates observed in females as a result of the pandemic.^{2,7}
- The percentage of the population identified as at-risk in 2021 increased with increased density of social vulnerability characteristics ($p < 0.05$), which is consistent with the higher mental distress documented in more vulnerable populations.⁹ While the percentage of utilizers in the at-risk population did not differ based on poverty or education status ($p > 0.05$), the percentage of utilizers differed based on minority status ($p < 0.05$). This may reflect a potential disparity in access among certain groups, which has historically been deemed the "social determinants of mental health."¹⁰
- Disproportionately more white utilizers existed compared to other racial groups ($p < 0.05$), which is consistent with previous observations.^{3,7} Historically marginalized communities have faced historic barriers in accessing mental health care despite typically reporting more symptoms of anxiety and/or depression.¹¹ These findings aligned with the results of a study that identified a wide racial and ethnic gap in antidepressant use among people with private coverage.⁶
- Utilization among different generations differed significantly and did not follow a parallel increase ($p < 0.05$). The percentage of Millennial utilizers increased consistently over time. Though increases were also noted in both the Gen X and Gen Z populations, utilization in the Boomer population remained consistent. Researchers had hypothesized that older populations, identified as higher risk for complications from contracting COVID-19, would experience more mental distress. However, Millennials demonstrated higher risk for anxiety/depression which may indicate that other factors may be contributing to increased mental health distress in young adults.^{4,9}

Limitations

- Analyzing a continuously enrolled population at a commercial health plan may inherently select for a more socially stable population.
- Utilizing census tracts to determine social vulnerability does not allow for identification of individual member characteristics.
- The population at-risk for anxiety and depression was determined by member-reported information only available in a proportion of members.
- Some medication classes (i.e., SSRIs, SNRIs, TCAs) have alternative uses such as insomnia, fibromyalgia, neuropathic pain, and migraine prevention.

Conclusions

- Total utilization of mental health medications and/or services for anxiety and depression increased from 2018 to 2021.
- The racial/ethnic disparities identified in utilization were consistent with previous research documenting disparities in the use of evidence-based drug therapies.

References

- Cutler AJ, Keyton KR, Higa S, et al. Annual costs among patients with major depressive disorder and the impact of key clinical events. *J Manag Care Spec Pharm*. 2022;28(12):1335-1343. doi:10.18953/jcp.2022.28.12.1335
- World Health Organization. Scientific Brief: Mental Health and COVID-19: Early evidence of the pandemic's impact. 2 March 2022. Available at: https://www.who.int/publications/m/item/WHO-2019-nCoV_Sci_Brief_Mental_Health-2022.1
- Kaiser Family Foundation. Panchal N, Kamal R, Cox C, Garfield R. The Implications of COVID-19 for Mental Health and Substance Use [Internet]. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>
- Johns Hopkins Bloomberg School of Public Health. Mental Health and COVID-19 [Internet]. Available at: <https://publichealth.jhu.edu/departments/mental-health/research-and-practice/mental-health-and-covid-19/>
- Ngugi SI. Racial disparities in medication use: imperatives for managed care pharmacy. *J Manag Care Spec Pharm*. 2020;26(11):1468-1474. doi:10.18953/jcp.2020.26.11.1468
- Jung K, Lim D, Shi Y. Racial-ethnic disparities in use of antidepressants in private coverage: implications for the Affordable Care Act. *Psychiatr Serv*. 2014;65(9):1140-46
- Brodie DJ, Gu Q. Antidepressant use among adults: United States, 2015-2018. *NCHS Data Brief*. no 377. Hyattsville, MD: National Center for Health Statistics; 2020.
- Algraja M, Neksoy A, Falgas Baguel I, Wang Y, Alvarez K. Social Determinants of Mental Health: Where We Are and Where We Need to Go. *Curr Psychiatry Rep*. 2018;20(11):95. Published 2018 Sep 17. doi:10.1007/s11920-018-0265-9
- McGrory EE, Presskreischer R, Han H, Barry CL. Psychological Distress and Loneliness Reported by US Adults in 2018 and April 2020. *JAMA*. 2020;324(11):93-94. doi:10.1001/jama.2020.9740
- Bernardin E, Attaleno L, Rutter M, Compton MT. Social Determinants of Mental Health As Mediators and Moderators of the Mental Health Impacts of the COVID-19 Pandemic. *Psychiatr Serv*. 2021;72(5):598-601. doi:10.1176/appi.ps.2020.0393
- Kaiser Family Foundation. Panchal N, Saunders H, Mugga N. Five Key Findings on Mental Health and Substance Use Disorder by Race/Ethnicity [Internet]. Available at: <https://www.kff.org/racial-equity-and-health-policy/issue-brief/key-findings-on-mental-health-and-substance-use-disorder-by-race-ethnicity/>