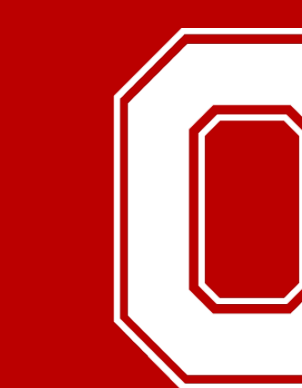


Retrospective analysis of medication fills following an initial 90-day supply maintenance prescription: medication fill patterns, prescription characteristics, and member socio-demographics



THE OHIO STATE UNIVERSITY

HEALTH PLAN

Taylor Blevins, PharmD¹; Amanda Bain, PharmD, MPH, MBA¹; Stephen Phillips, MBA¹; Tasneem Motiwala, PhD, MPH, SMBA^{1,2}

¹The Ohio State University Health Plan, Inc.; Columbus, OH; ²The Ohio State University College of Medicine Department of Biomedical Informatics; Columbus, OH

Background

- Published comparisons between 30-day and 90-day prescriptions found that longer-duration prescriptions were associated with increased medication adherence and nominal wastage.^{1,2,3}
- Various prescription characteristics and member socio-demographics have shown different associations with adherence rates.^{3,4,5,6}
- While it is important to balance member needs to keep adherence rates high, the prevalence of possible medication wastage with longer-duration prescriptions should be assessed.
- Determining factors that may be associated with medication wastage could guide future education of network providers and member-facing health plan clinical staff.

Objectives

- Assess the prevalence of within-class drug switching and medication refill nonadherence with initial 90-day fills of maintenance medications.
- Categorize the medication fills as Drug Switch ≤90 Days, No Next Fill, Drug Switch >90 Days and ≤365 Days, or Same Drug and assess category distribution based on:
 - Therapeutic area and drug class
 - Prescription characteristics
 - Socio-demographic factors

Methods

- An index date was created for each 90-day prescription filled from 2016 to 2020 if the member had no fills for that active ingredient in the 365 days prior to the initial prescription.
- Index prescriptions were included if:
 - The filling member was continuously enrolled 365 days prior to and 365 days following an index 90-day prescription.
 - The prescription was for one of the following therapeutic areas: antihypertensive, lipid-lowering, antidepressant, or oral hypoglycemic.
- Medication fills were categorized as:
 - Drug Switch ≤90 Days:** A different drug within the same drug class was filled ≤90 days after the index date.
 - No Next Fill:** The index prescription was not refilled and no other drug in the same drug class was filled within 365 days of the index date.
 - Drug Switch >90 Days and ≤365 Days:** A different drug within the same drug class was filled >90 days but ≤365 days from the index date.
 - Same Drug:** A drug with the same active ingredient was filled within 365 days of the index date.
- Medication fill category distributions were assessed based on prescription characteristics and member socio-demographics.
- High percentage minority and poverty statuses were assigned based on members living at an address in the top 20% of census tracts with a high density of households belonging to minorities or in poverty.
- Medication fills for members with addresses that could not be geocoded were excluded from minority and poverty analyses (n = 219).
- A chi-square test (or Fisher's exact test if necessary) was used to determine statistical significance.

Results

■ Drug Switch ≤90 Days ■ No Next Fill ■ Drug Switch >90 and ≤365 Days ■ Same Drug

Figure 1. Medication Fills by Therapeutic Area



Figure 2. Medication Fills by Drug Class (Classes with ≥100 Total Index Dates Reported)

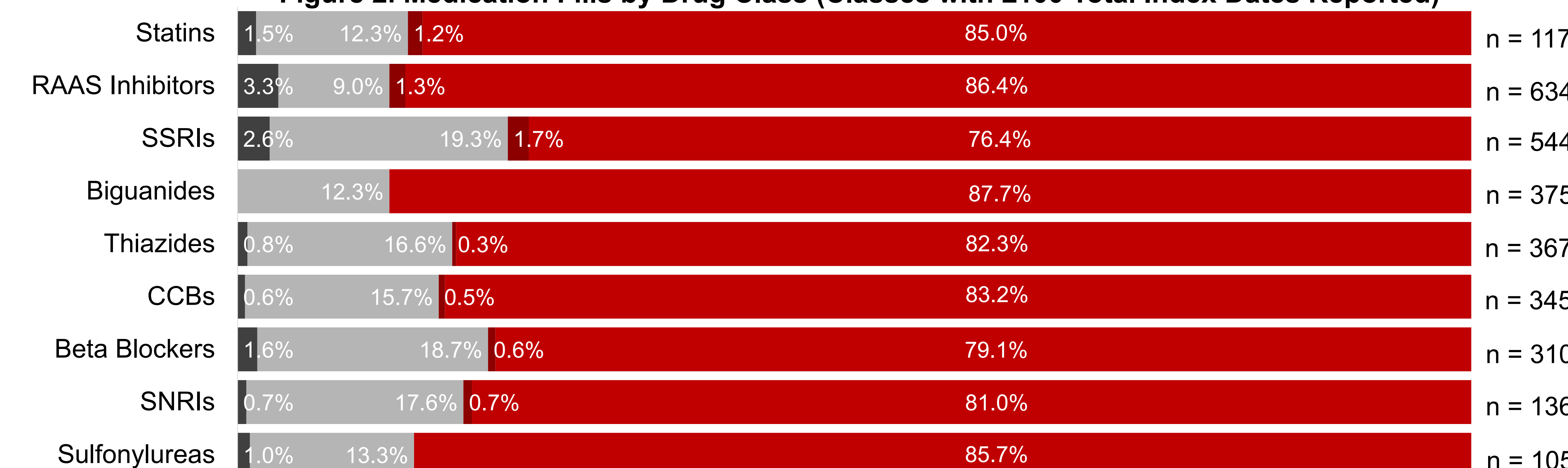


Figure 3. Medication Fills by Retail vs Mail Order

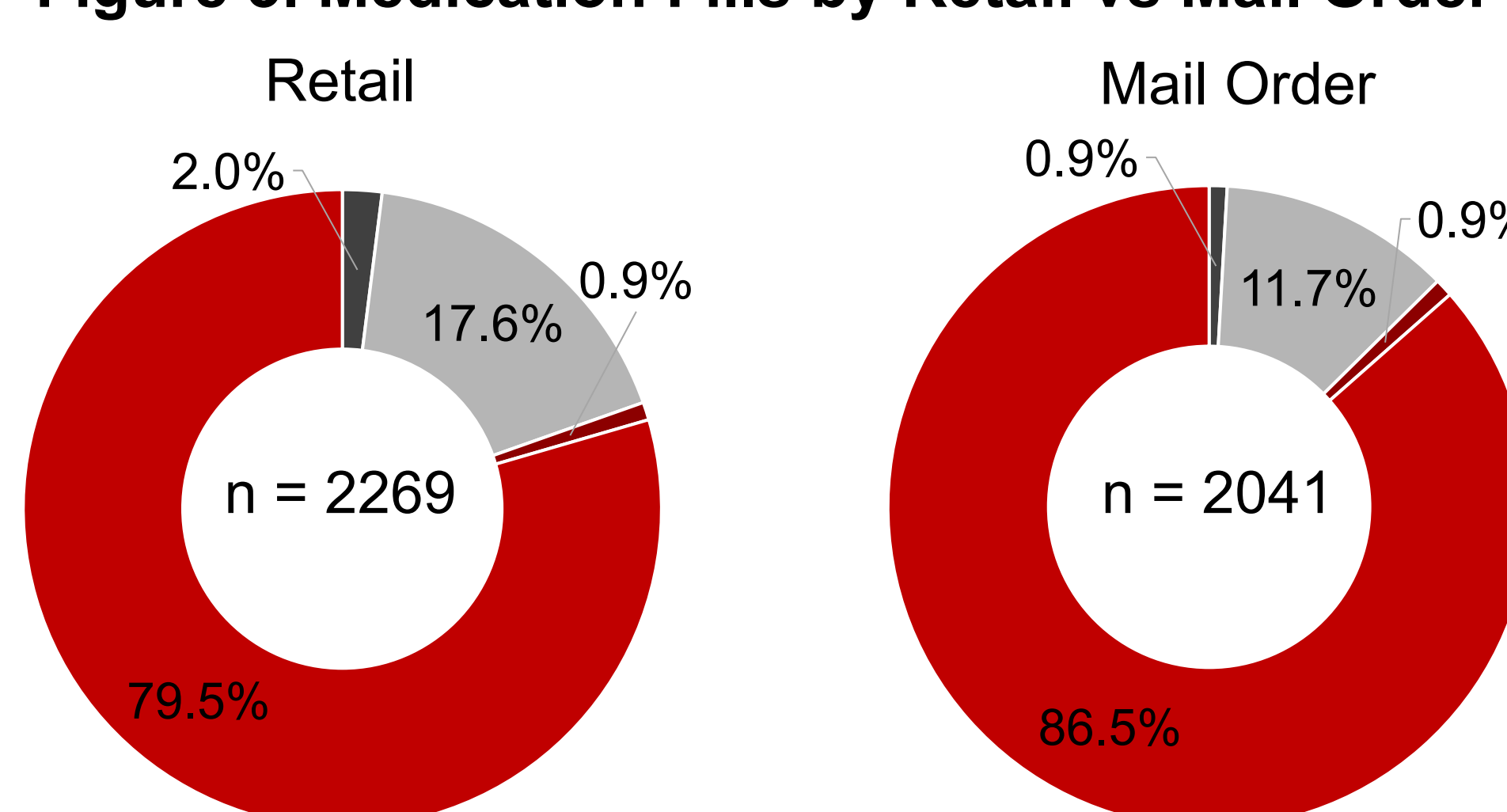


Figure 4. Medication Fills by Generic vs Brand

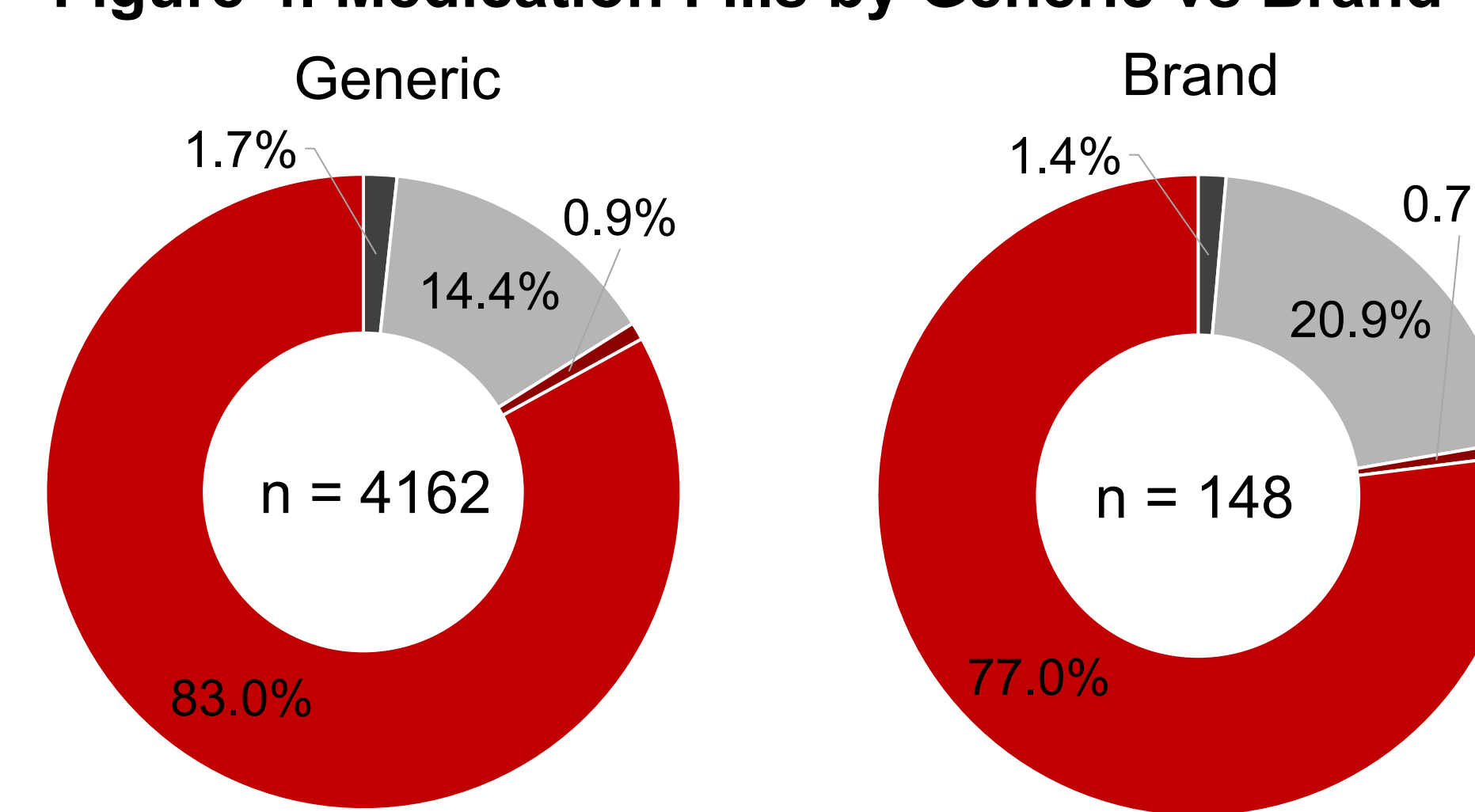


Figure 5. Medication Fills by Generation

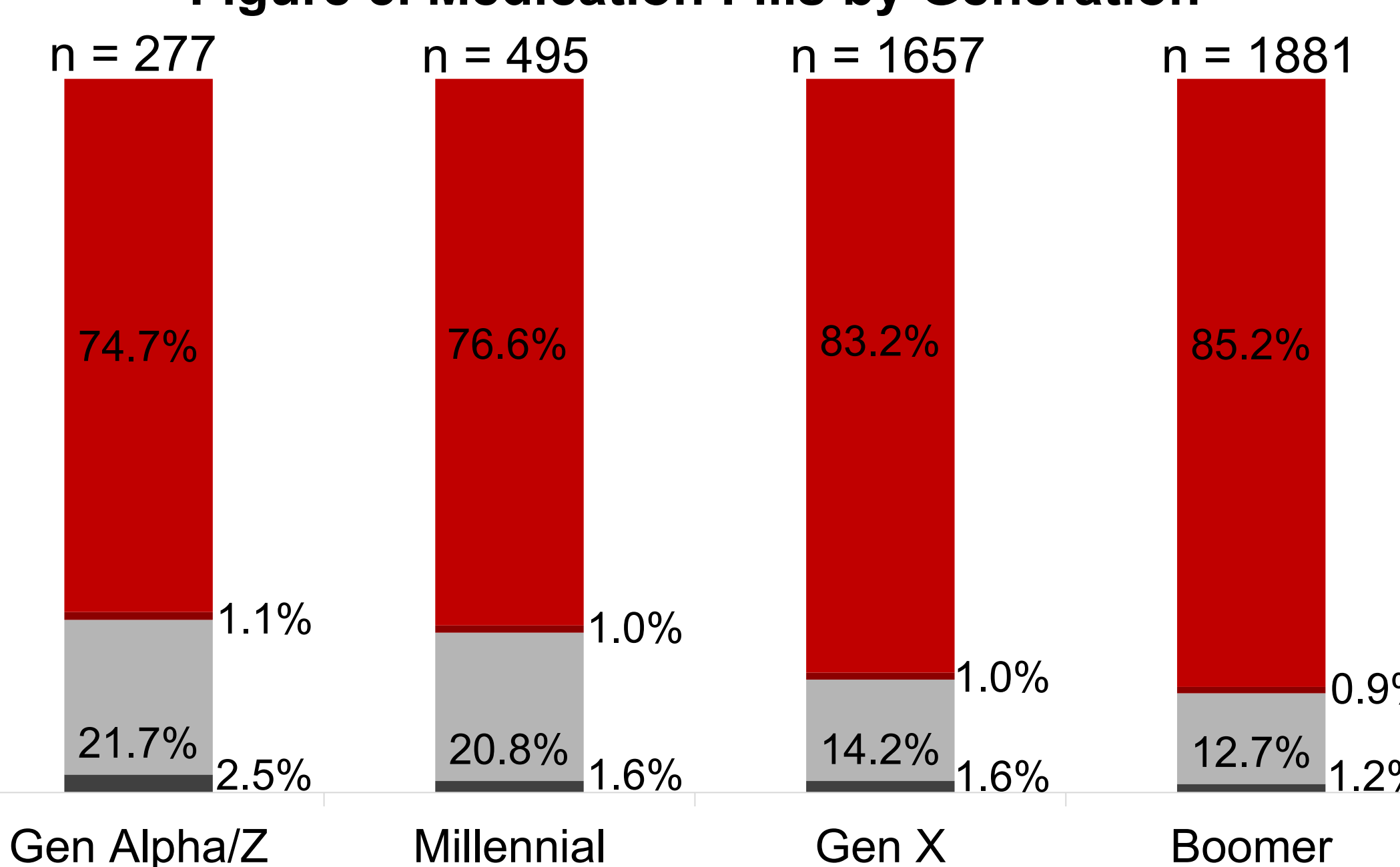


Figure 6. Medication Fills by Minority Status

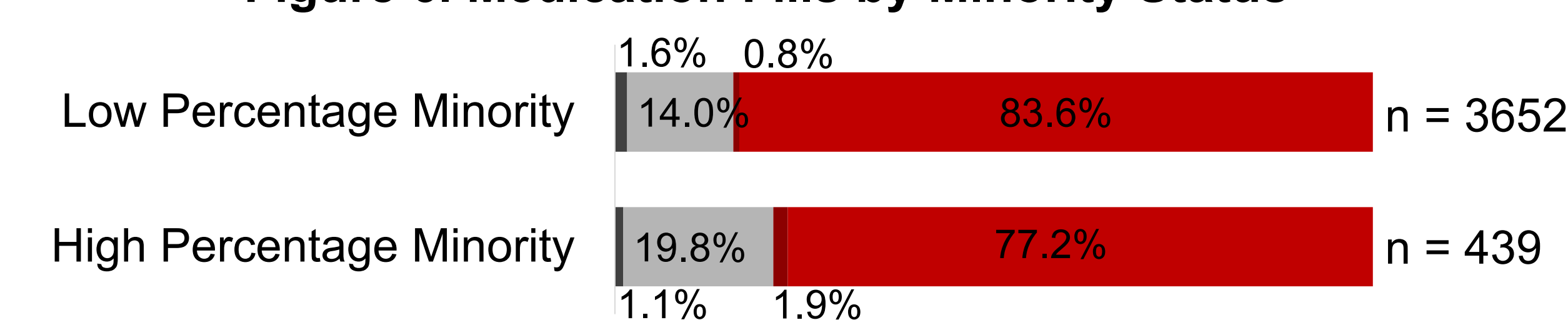
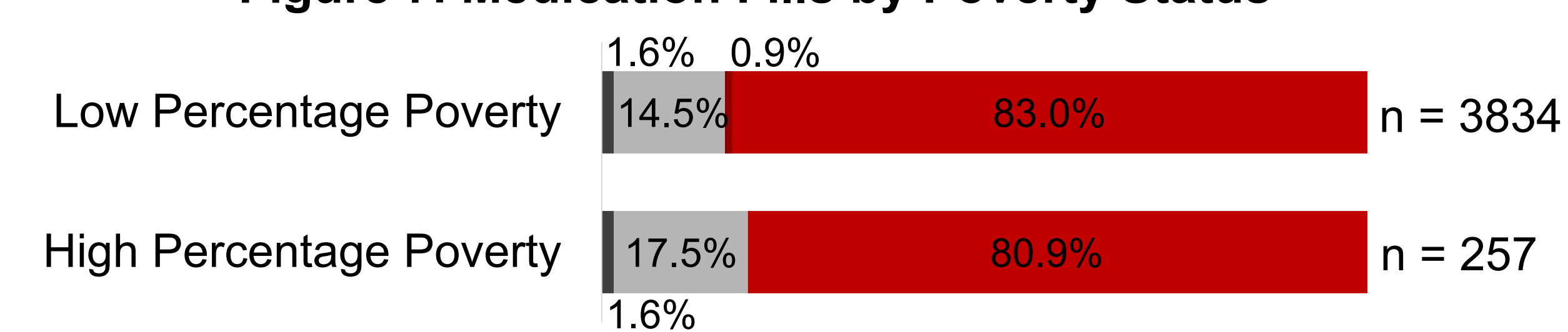


Figure 7. Medication Fills by Poverty Status



Discussion

- Medication refill nonadherence (as demonstrated by the No Next Fill category) occurred 14.8% of the time, which is similar to the 17.0% of unused medication for chronic conditions reported in a patient survey.⁷
- Only 1.5% of fills in this analysis were categorized as Drug Switch ≤90 Days, which differs from previously reported rates of patient drug switching of approximately 11.3%.^{1,2}
- SSRIs and correspondingly the antidepressant therapeutic area had the highest percentage of index prescriptions with No Next Fill.* These results may be due to a delayed onset of therapeutic effect (4-6 weeks) compared to their adverse effects, which present more quickly.
- RAAS inhibitors were the most likely to have a Drug Switch ≤90 Days.* The ACE inhibitor-induced cough is a common reason that patients require a switch.
- Prescriptions filled at retail were more likely to have an index prescription with No Next Fill or with a Drug Switch ≤90 days.* Automatic refill settings at mail order could play a role in these results.
- Prescriptions for brand medications had a higher percentage of index prescriptions with No Next Fill compared to generic medications. This trend could reflect cost concerns with brand medications. The lack of statistical significance could be due to sample size.
- Gen Alpha/Z and Millennial generations were more likely to have index prescriptions with No Next Fill compared to Gen X and Boomer generations.* It has been reported that younger generations stop taking medication when they start to feel better.⁸
- Members living in areas with higher percentages of households belonging to minorities were more likely to have index prescriptions with No Next Fill.* Previous studies have also found minority status to be a predictor of nonadherence.⁶
- Members living in areas with higher percentages of households in poverty were more likely to have an index prescription with No Next Fill. The lack of statistical significance could be due to sample size.

*denotes statistical significance

Limitations

- Reliance on pharmacy claims to estimate medication use may result in overestimation of adherence.
- High percentage minority and poverty statuses were estimated using census data and were not member-specific.

Conclusions

- The prevalence of medication refill nonadherence was comparable to existing data, confirming concerns for potential wastage.
- Clinicians should be educated on factors that may increase the risk of possible medication wastage/nonadherence to optimize adherence and reduce wastage.

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