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Impact of the Geriatric Mini-Fellowship on Prescribing Patterns of the Primary Care Providers

Amy Zahn, PharmD and Sharon Leigh, PharmD, BCPS

Background

- Geriatric patients are likely to experience adverse drug events related to high-risk medication use. Polypharmacy is also common and has a significant impact on the health of older adults.
- The American Geriatric Society Beers Criteria lists potentially inappropriate medications for older adults.¹
- Current literature suggests that Implementing interventions and deprescribing practices have a role in reducing costly hospitalizations.
 - STOPP (Screening Tool of Older People's Prescriptions) was designed to address polypharmacy.²
 - Medication review and follow-up services for older, polypharmacy patients lowered medication-related costs.³
- Projections suggest there is an insufficient supply of geriatrician services.⁴
 - Per person personal health care spending for people 65 years and older is three times higher than spending per working-age adult.⁴
 - Individuals aged 65 and older are expected to increase from 14.5 percent of the U.S. population in 2014 to 21.7 percent by 2040.⁵
- In 2018, a Geriatric Mini-Fellowship Program was implemented. The program was designed to:
 - Increase primary care provider competencies in managing geriatric syndromes.
 - Train PCP's to be geriatric medicine leaders to share awareness of geriatric care in their respective clinics.
- The program curriculum focused on the "Four M's" of geriatric care.
 - Medication, Mobility, Mentation, What Matters
- Two cohorts of fellows have graduated from the program.

Purpose

- Quantify the prescribing pattern changes of high-risk medications of the geriatric fellows before and after completing the program.
- Identify the geriatric fellows' perceptions on deprescribing after completing the program.

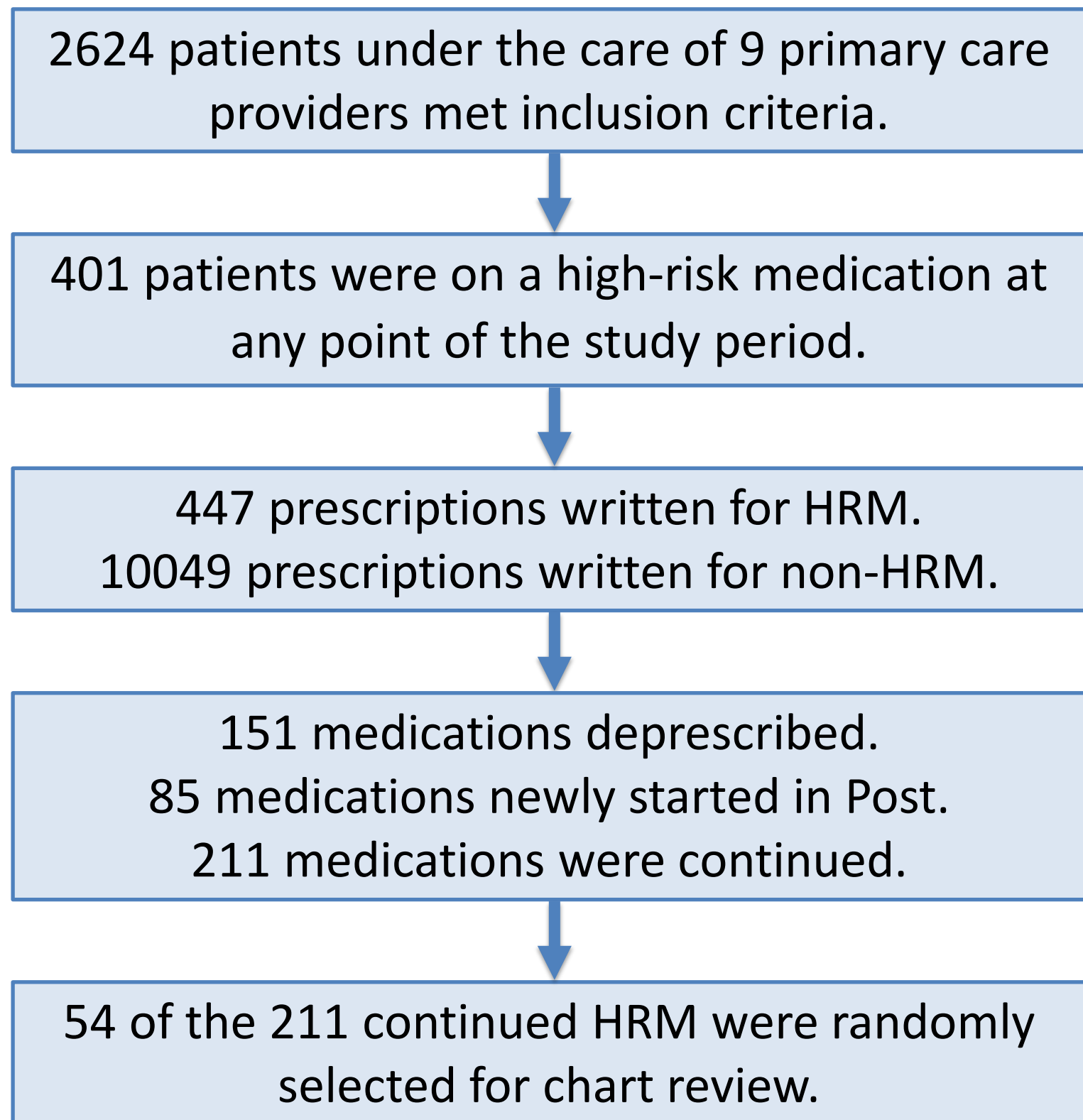
Study Design

- Four high-risk medication drug classes were identified for an increased fall risk and were selected for this study.¹
 - Urinary Agents, Tricyclic Antidepressants, Muscle Relaxants, and Z-drugs
- Study Period**
 - May 2017 to May 2020
 - Fellowship Cohort 1: Start Date April 16, 2018
 - Pre-intervention: As of May 2018
 - Post-intervention: As of May 2019
 - Fellowship Cohort 2: Start Date April 20, 2019
 - Pre-intervention: As of May 2019
 - Post-intervention: As of May 2020
- Inclusion Criteria**
 - Adults aged 65 years and older
 - Enrolled in the outpatient care of a geriatric fellow
 - Participated in at least one PCP office visit in the pre-intervention period and one visit in the post-intervention period.
- Primary Endpoints**
 - Number of patients on a high-risk medication in the identified classes
 - Number of high-risk medications in the Pre period
 - Number of high-risk medications in the Post period

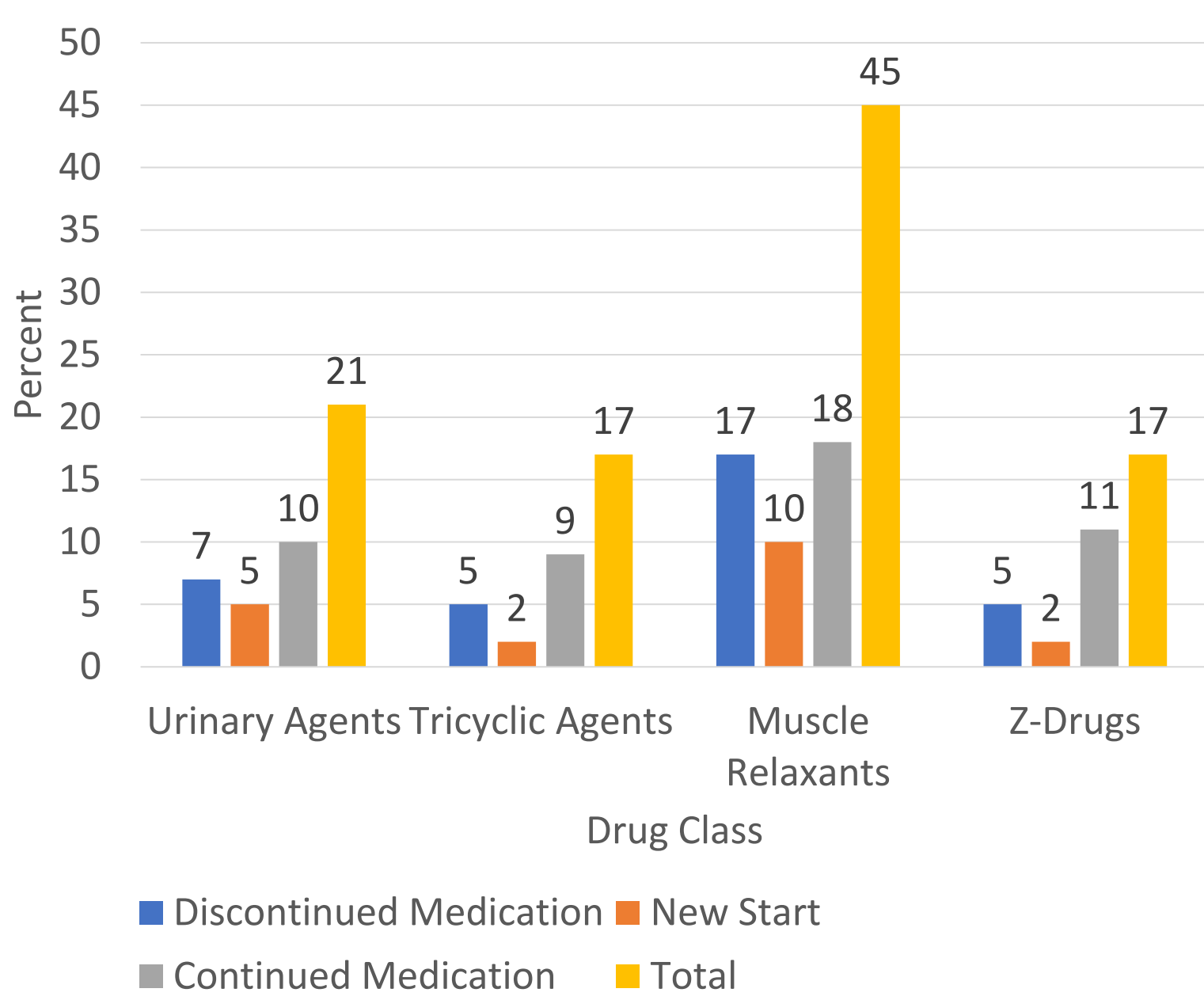
Methods

- Identify patients meeting inclusion criteria and on a high-risk medication (HRM) in the Pre and Post periods.
- Perform a retrospective chart review on random selection of patients who continued one HRM in the pre-period and one HRM in the post-period.
- Collect qualitative information about the geriatric fellows' perceptions on prescribing pattern via 6-question Google Forms survey.

Results



Percent of HRM Prescribed and Deprescribed in Both Cohorts (n=447)

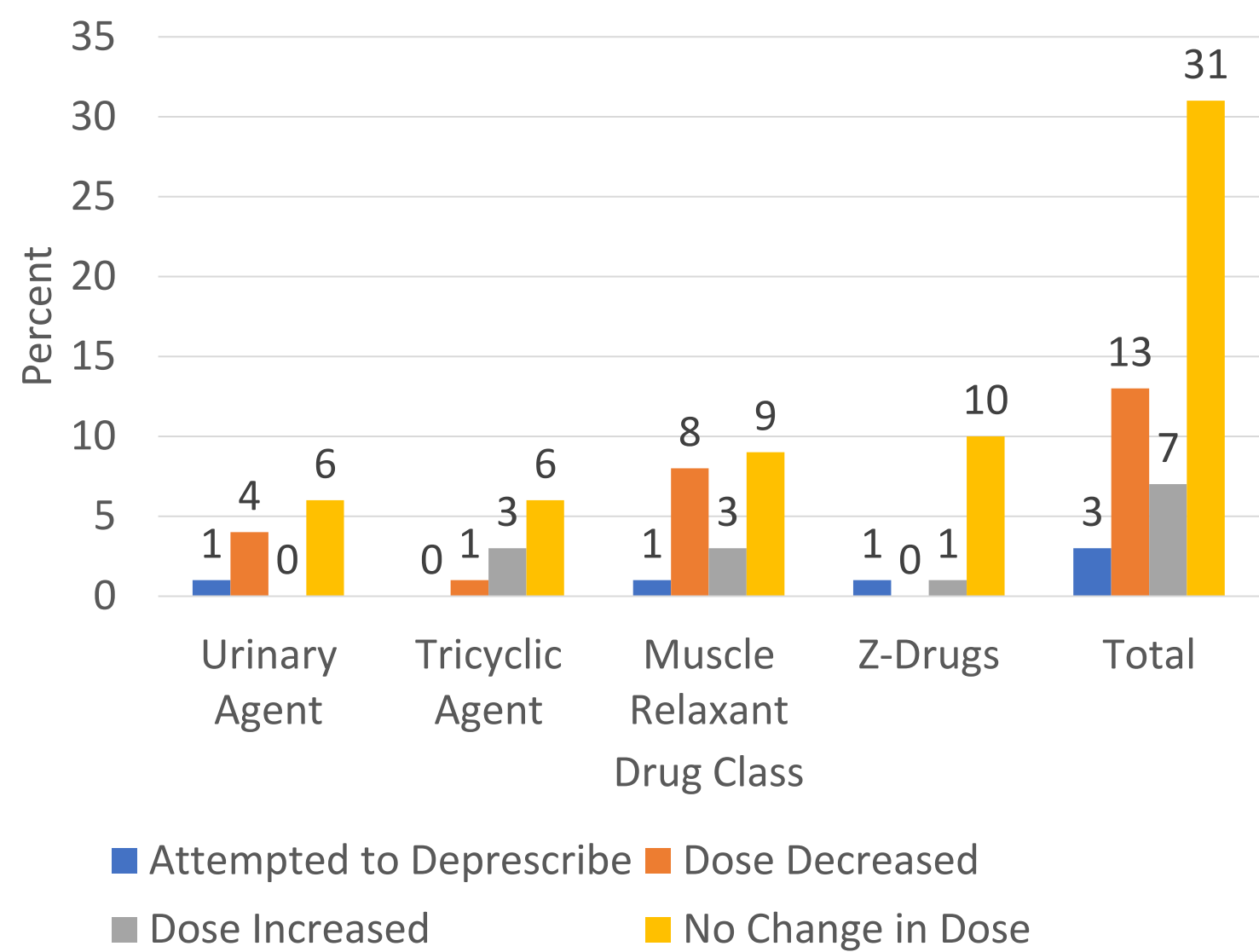


Retrospective Chart Review

Total Dose Changes of Continued Medications

Class	Drug	Total Dose in Pre (mg)	Total Dose in Post (mg)
Urinary Agents	Mirabegron	15	0
	Oxybutynin	100	50
	Solifenacin	5	5
TCAs	Amitriptyline	235	185
	Nortriptyline	40	236
	Baclofen	85	85
Muscle Relaxants	Cyclobenzaprine	86	26
	Metaxalone	800	800
	Methocarbamol	4250	2750
Z-drugs	Tizanidine	70	48
	Eszopiclone	3	3
	Zolpidem	55	60

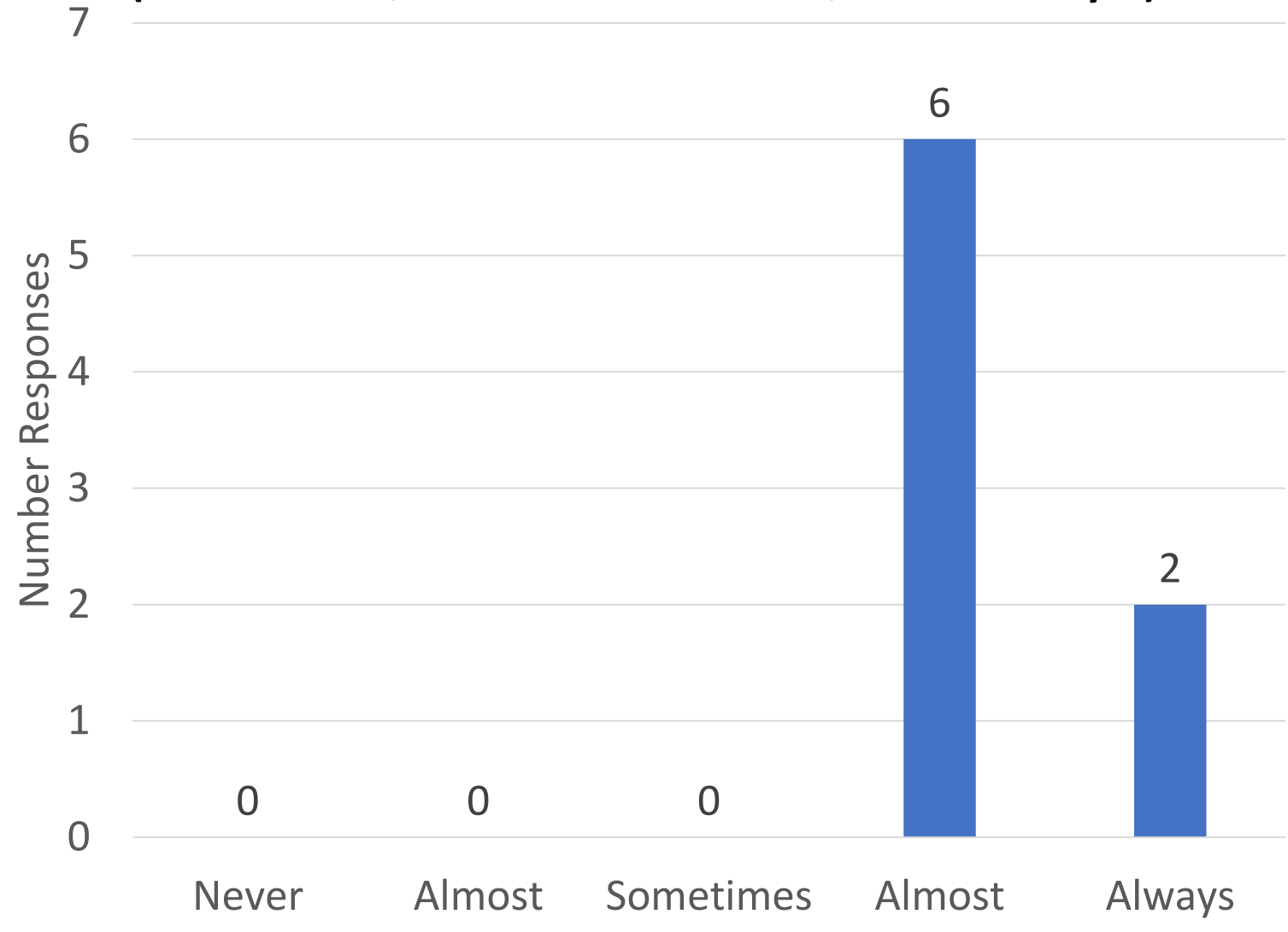
Deprescribing of Randomly Selected HRM Continued in Pre and Post Period (n=54)



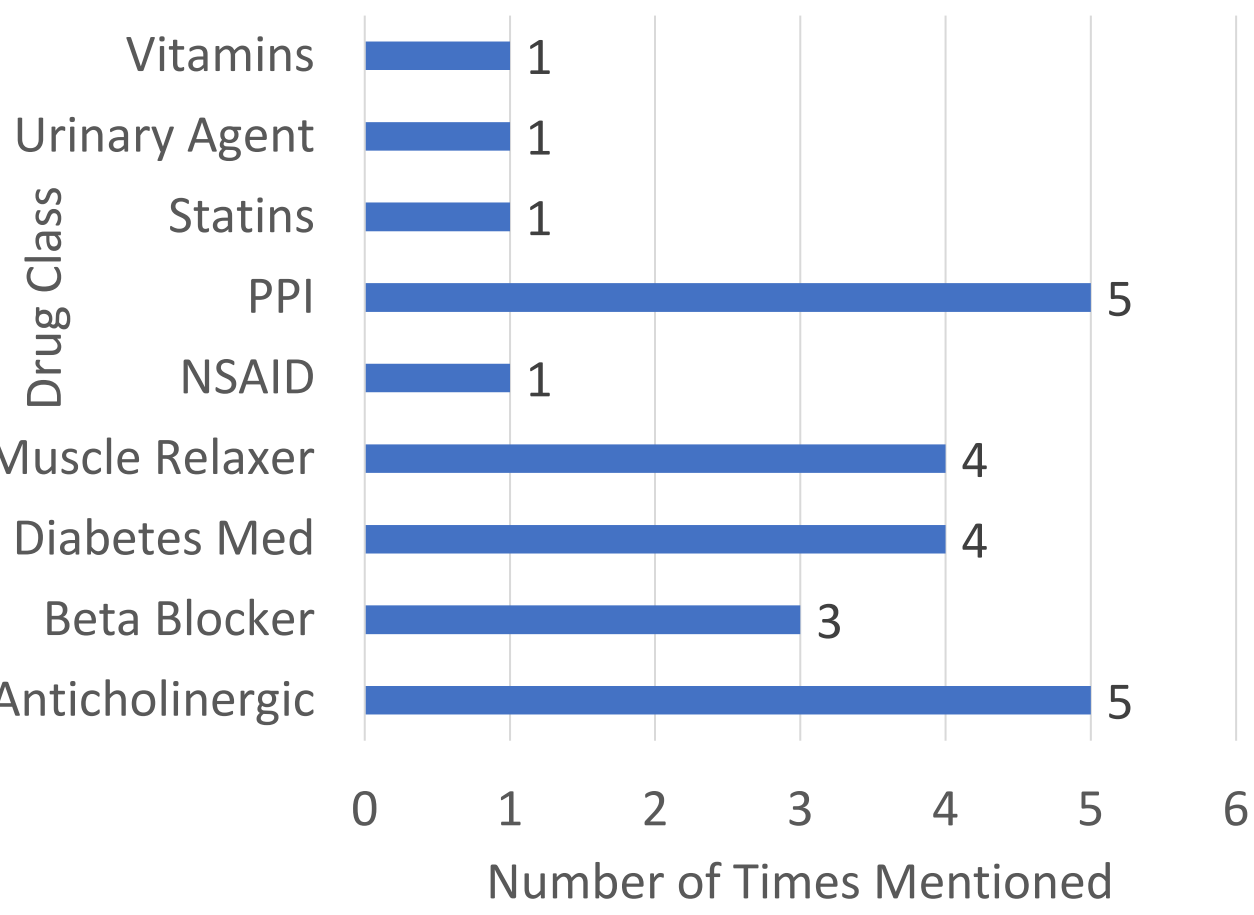
Qualitative Survey Results

Eight of the twelve fellows (66.7%) responded to the survey.

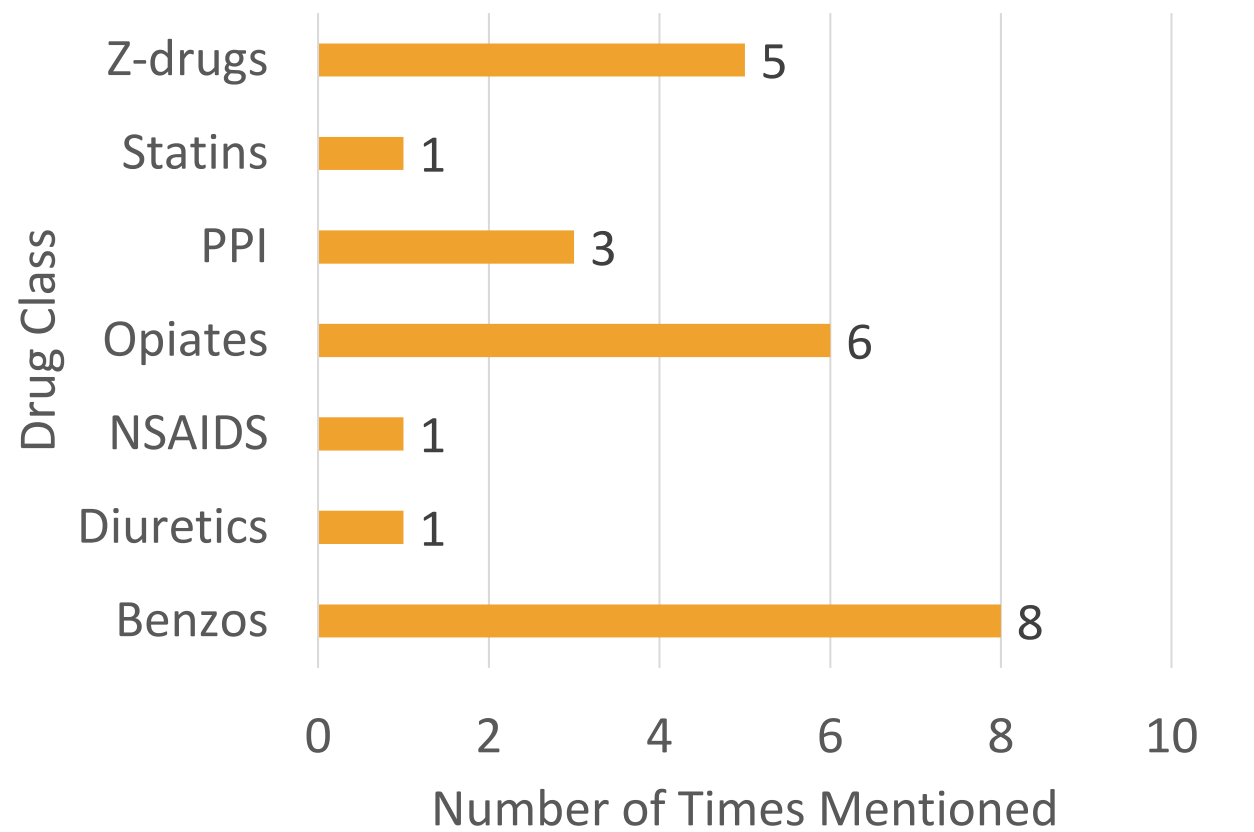
After completing the Geriatric Mini-Fellowship, how often do you attempt to deprescribe high-risk meds in older adults? (1=Never, 3=Sometimes, 5=Always)



EASIEST HRM to Deprescribe

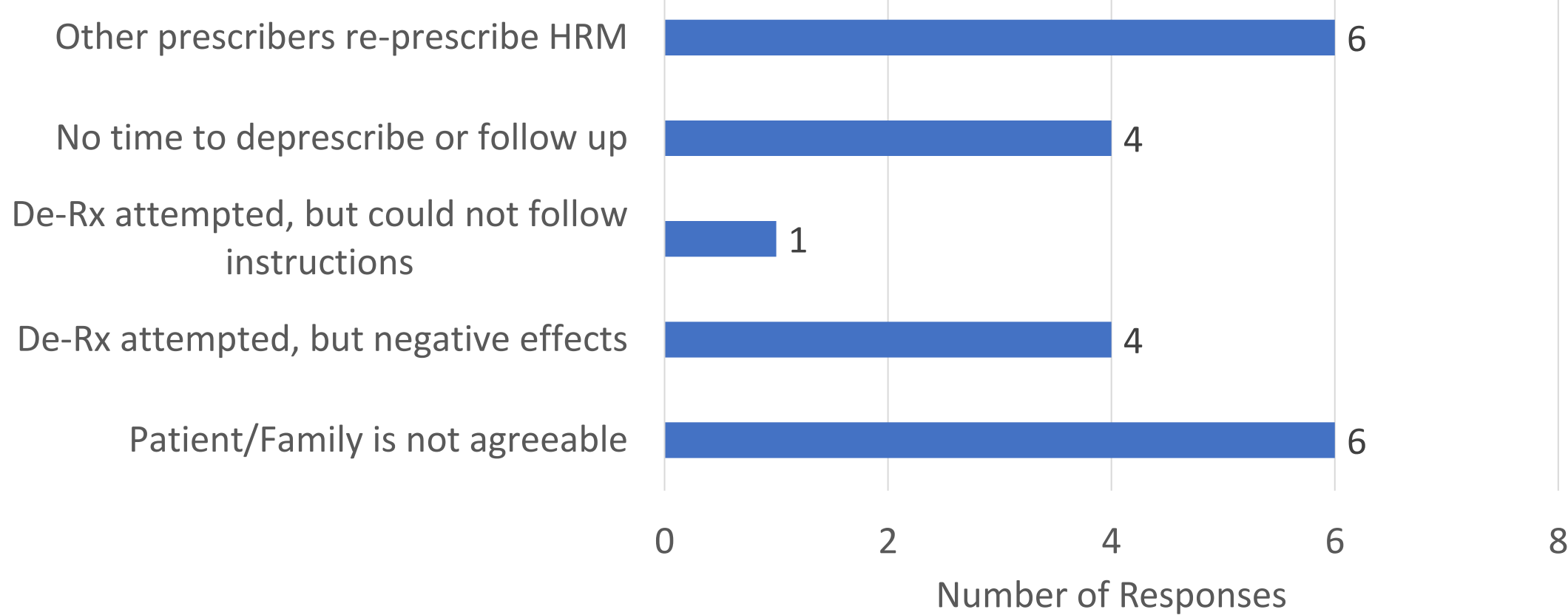


HARDEST HRM to Deprescribe



Results (continued)

What barriers do you face when trying to deprescribe high-risk medications in Geriatric patients? (Select all that apply)



Discussion

Conclusions

High-Risk Medication Data:

- For most drug classes studied, deprescribing occurred more often than new starts.
- Continuing high-risk medication use was very common across all drug classes.

Chart Review Data:

- The retrospective chart review identified cases of deprescribing that were not captured in the initial analysis.
 - Dose decrease occurred more often than dose increases.

Qualitative Survey Data:

- Geriatric fellowship respondents felt that they frequently attempted to deprescribe high-risk medications in older adults.
- Randomized selection of continued high-risk medication cases only estimates the distribution of the population.
- Limited number of primary care providers participating in the program. Data can easily be skewed by the practice of individual providers.
- The degree of life-limiting illness or patient life expectancy was not identified and would influence the potential for a medication to be inappropriate.⁶
- The cost impact of the Geriatric Mini-Fellowship program cannot be calculated from the results of this study.
 - Literature suggests that deprescribing interventions implement in patients with limited life expectancy have potential for mortality reduction and cost savings.⁶

Future Steps

- Identify a method for obtaining a control group.
 - Compare prescribing pattern of primary care providers before and after participation in the Geriatric Mini-Fellowship.
 - Describe the impact of the program on patient outcomes and cost.
- Investigate prescribing of other high-risk medication classes.
- Develop a plan to target high-risk medications that are considered most difficult to deprescribe.

References

- American Geriatrics Society Beers Criteria Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. *Journal of American Geriatrics Society*. 2019;67(4):674-694.
- O'Mahony D. STOPP/START criteria for potentially inappropriate medications/potential prescribing omissions in older people: origin and progress. *Expert Rev Clin Pharmacol*. 2020 Jan;13(1):15-22.
- Malet-Larrea A, Goyenechea E, Garcia-Cardenas V, et al. The impact of a medication review with follow-up service on hospital admissions in aged polypharmacy patients. *Br J Clin Pharmacol*. 2016;82:831-838.
- U.S. Department of Health and Human Services. "National and Regional Projections of Supply and Demand for Geriatricians: 2013-2025." April 2017. PDF File.
- "Aging Statistics." The U.S. Administration on Aging. Downloaded from: A Profile of Older Americans: 2016
- Shrestha S, Poudel A, Steadman K, et al. Outcomes of deprescribing interventions in older patients with life-limiting illness and limited life expectancy: A systematic review. *J Clin Pharmacol*. 2020; 86:1931-1945.