

Providence St. Joseph Health

Providence St. Joseph Health Digital Commons

Providence Pharmacy PGY1 Program at
Providence Milwaukie and Providence Newberg
Medical Centers 2021

Providence Pharmacy PGY1 Program at
Providence Milwaukie and Providence Newberg
Medical Centers

5-2021

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

Amy Zahn

Providence Milwaukie, amy.zahn@providence.org

Sharon Leigh

Providence Health & Services • Portland, OR, Sharon.Leigh@providence.org

Follow this and additional works at: https://digitalcommons.psjhealth.org/oa_mn_21



Part of the [Medical Education Commons](#), and the [Pharmacy and Pharmaceutical Sciences Commons](#)

Recommended Citation

Zahn, Amy and Leigh, Sharon, "Impact of the Geriatric Mini-Fellowship on Prescribing Patterns of the Primary Care Providers" (2021). *Providence Pharmacy PGY1 Program at Providence Milwaukie and Providence Newberg Medical Centers 2021*. 2.

https://digitalcommons.psjhealth.org/oa_mn_21/2

This Conference Proceeding is brought to you for free and open access by the Providence Pharmacy PGY1 Program at Providence Milwaukie and Providence Newberg Medical Centers at Providence St. Joseph Health Digital Commons. It has been accepted for inclusion in Providence Pharmacy PGY1 Program at Providence Milwaukie and Providence Newberg Medical Centers 2021 by an authorized administrator of Providence St. Joseph Health Digital Commons. For more information, please contact digitalcommons@providence.org.

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.

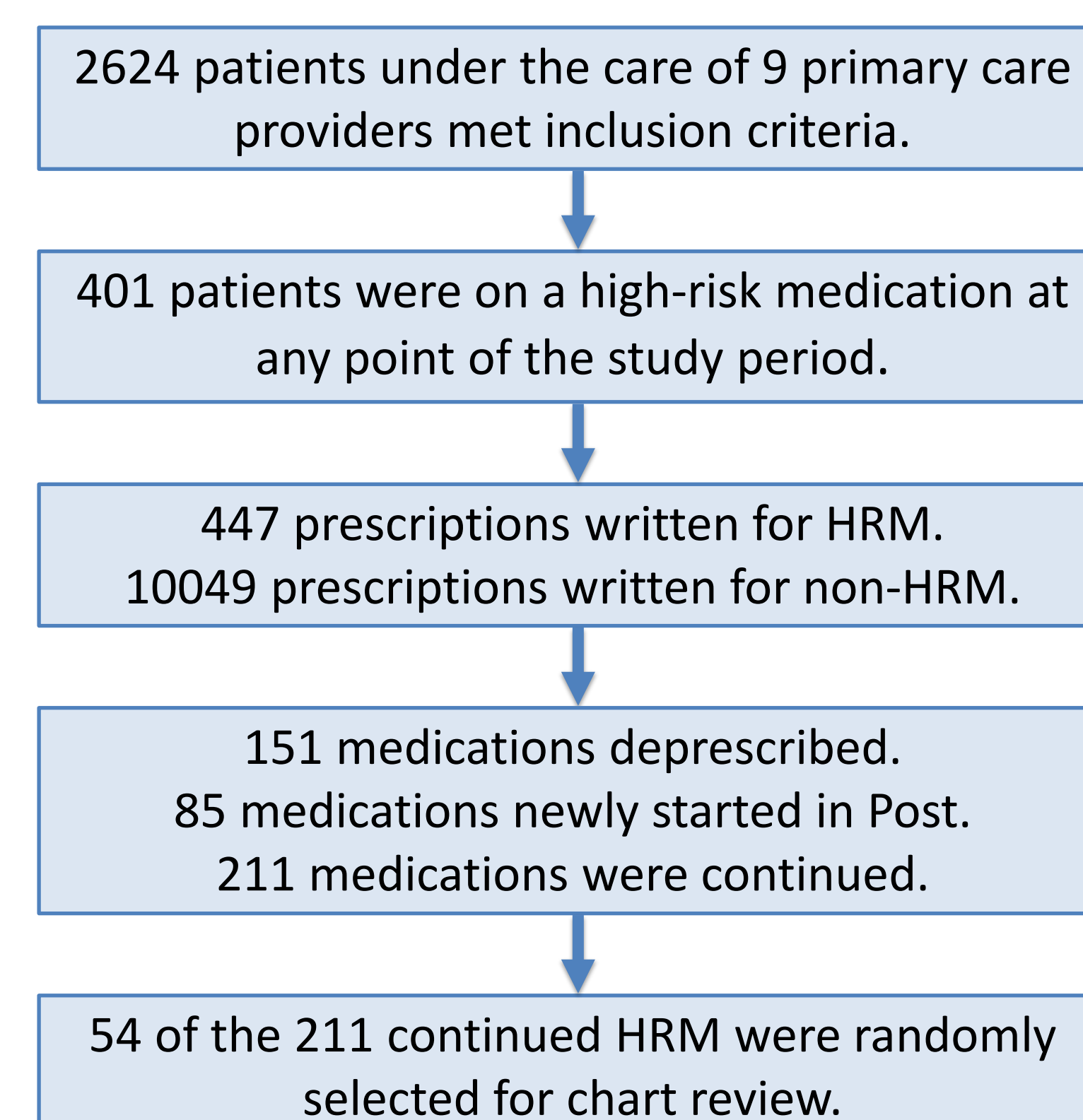
Study Design

- 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

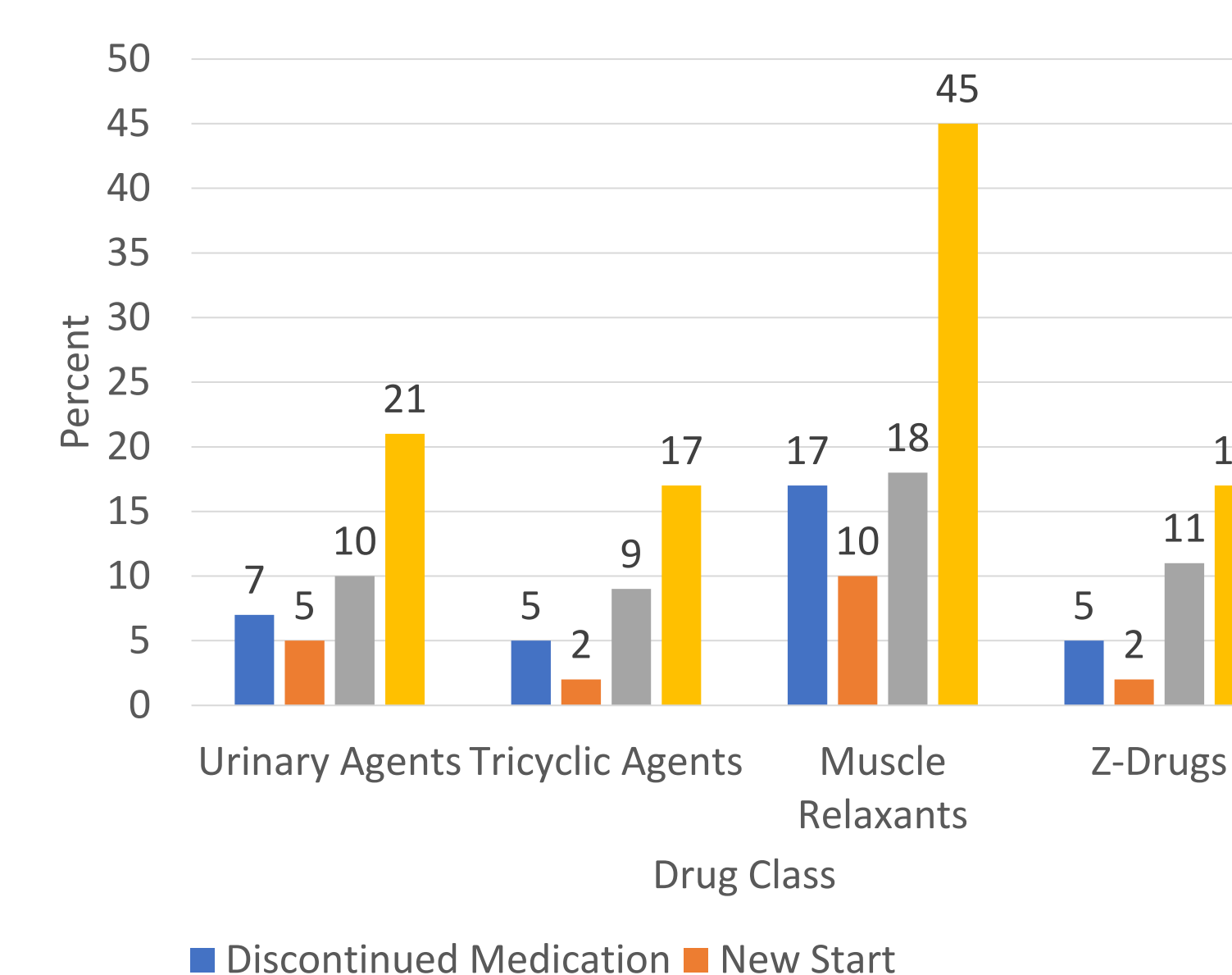
Methods

- 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)

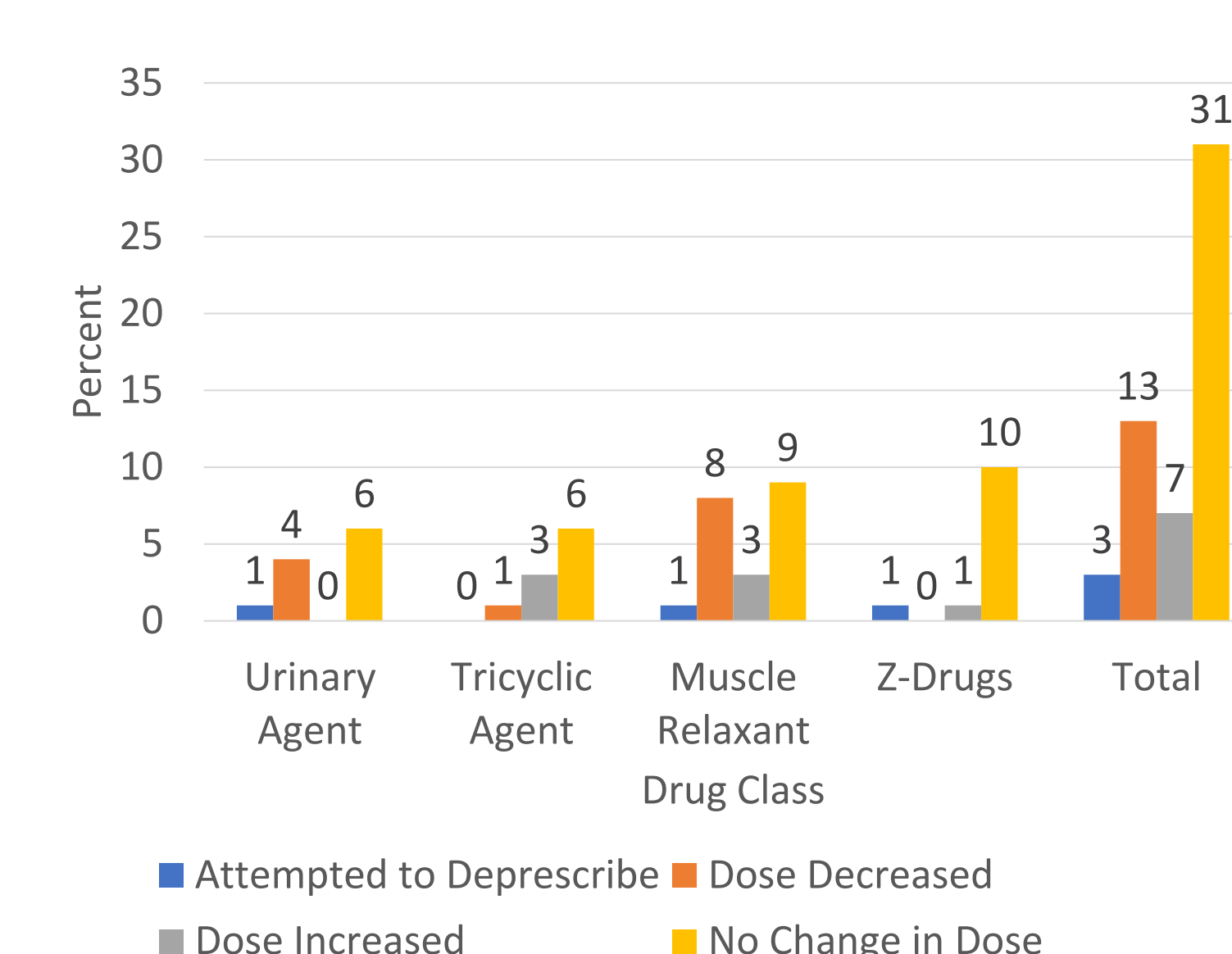


Retrospective Chart Review

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

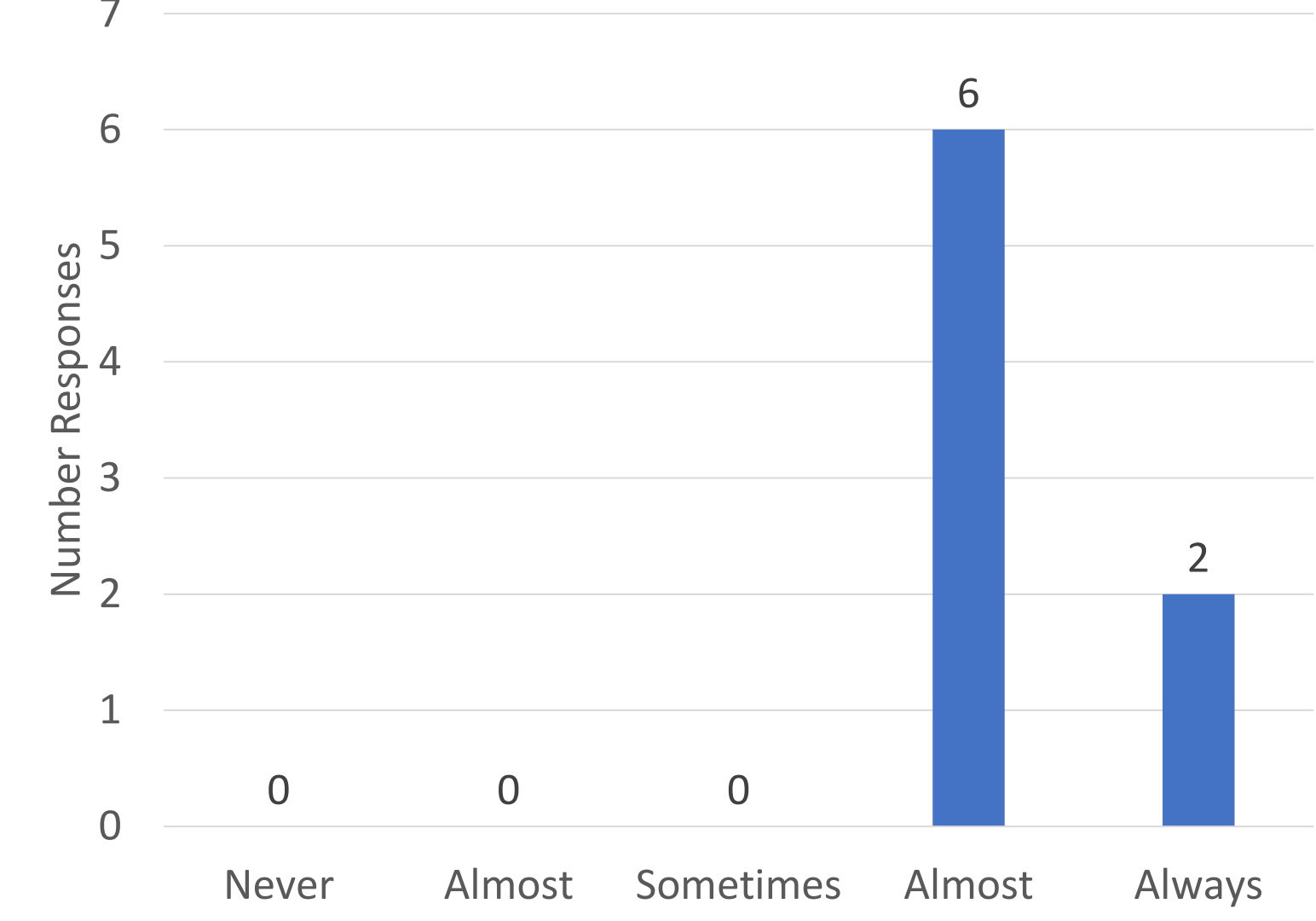
Deprescribing of Randomly Selected HRM Continued in Pre and Post Period (n=54)



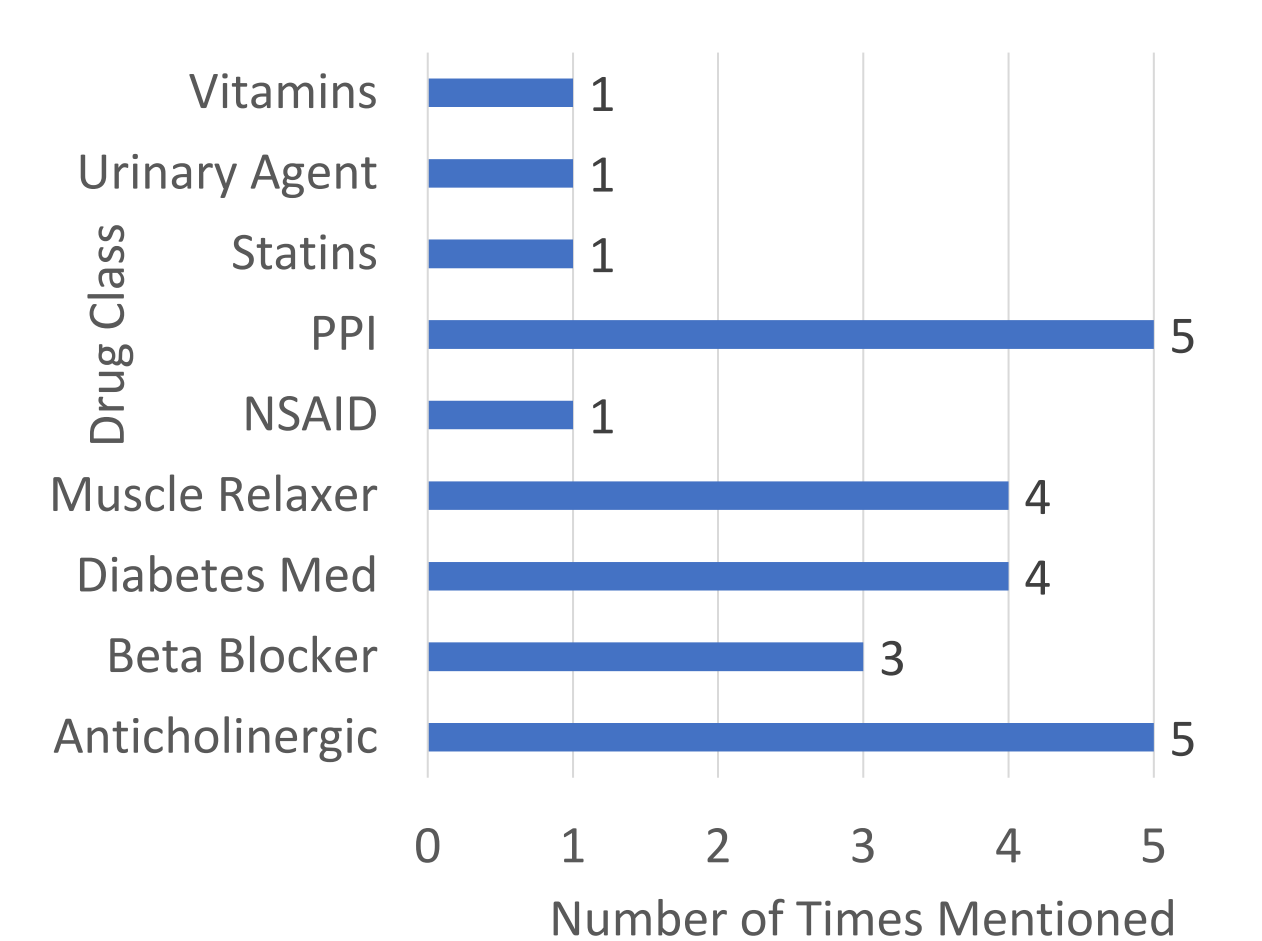
Qualitative Survey Results

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

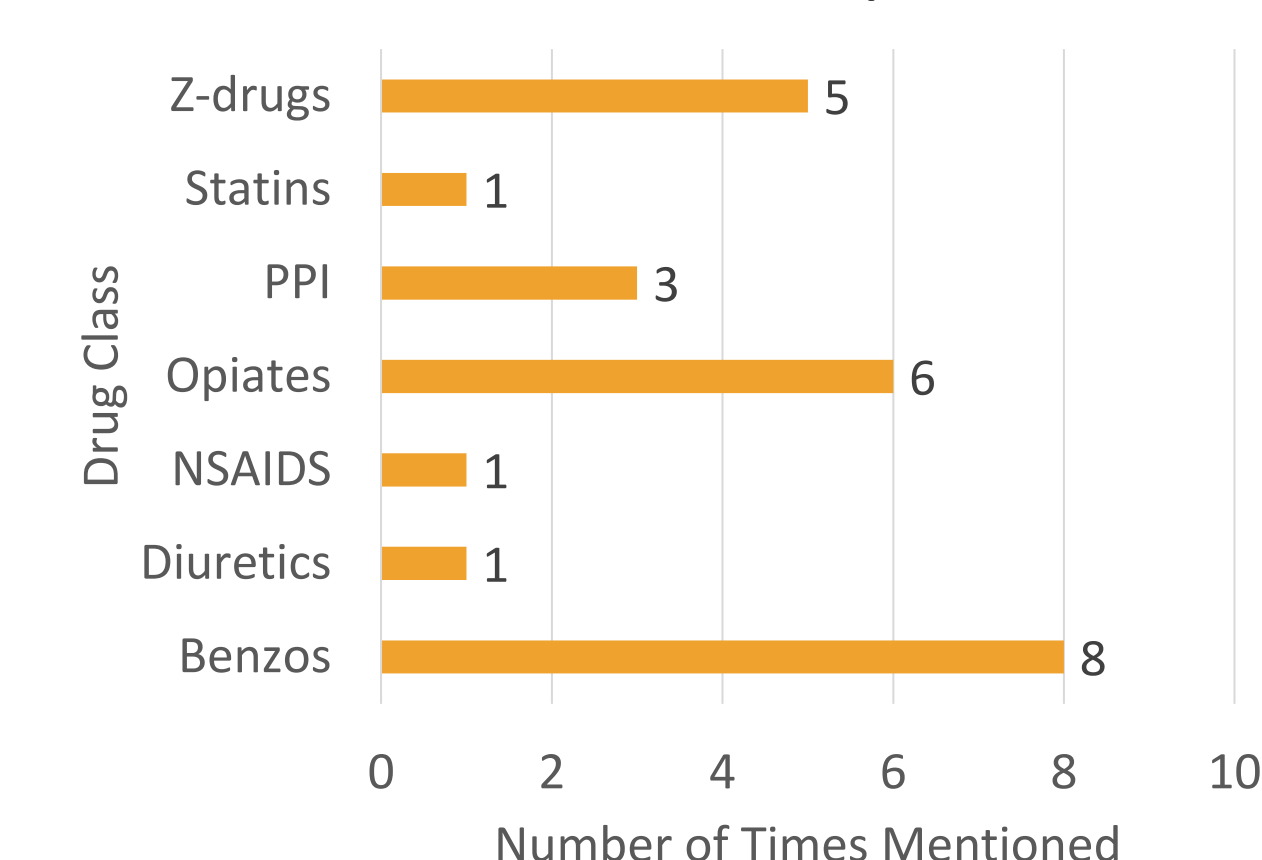
After completing the Geriatric Mini-Fellowship, how often do you attempt to deprescribe high-risk meds in older adults? (1=Never, 3=Sometimes, 5=Always)



EASIEST HRM to Deprescribe

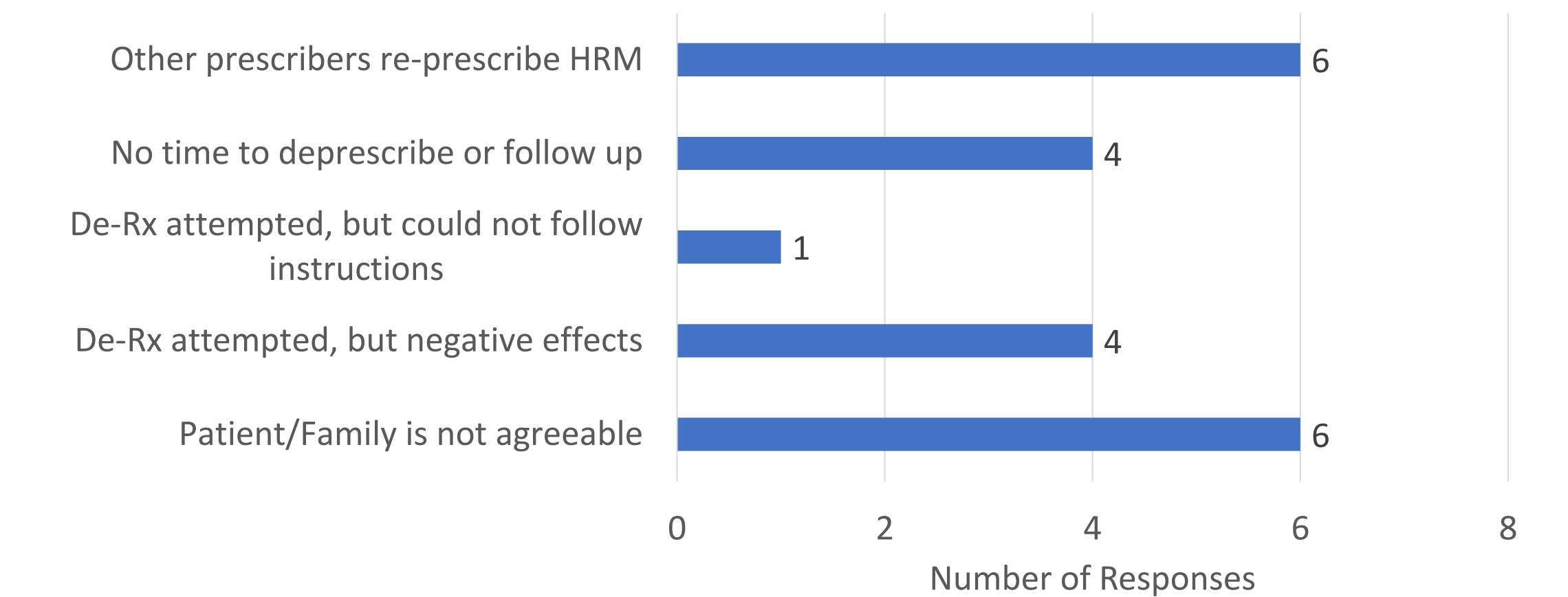


HARDEST HRM to Deprescribe



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.
 - Literature suggests that deprescribing interventions implement in patients with limited life expectancy have potential for mortality reduction and cost savings.⁶
- Limitations
 - 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.

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.
- Málet-Larrea A, Goyenechea E, García-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.