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2023

# Impact of Geriatric Mini-fellowship on Prescribing Practice of the PMG Primary Care Providers

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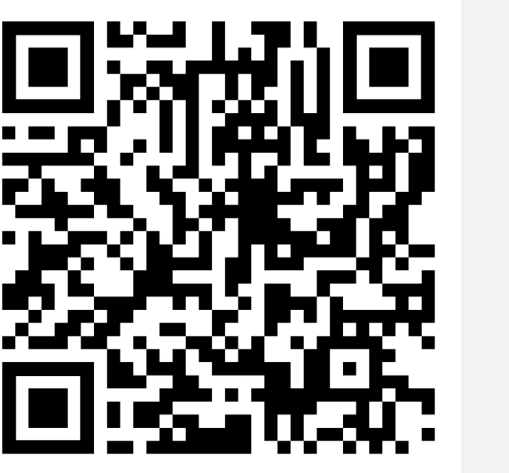
### Recommended Citation

Kuhlenberg, Madalyn and Leigh, Sharon, "Impact of Geriatric Mini-fellowship on Prescribing Practice of the PMG Primary Care Providers" (2023). *Providence Pharmacy PGY1 Program at Providence Portland and Providence St. Vincent Medical Centers 2023*. 3.

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## Background

- The geriatric population is an underserved population that often experiences adverse drug events from high-risk medications and polypharmacy.
  - Specifically, older adults taking > 4 medications are at increased risk of suffering from a fall.<sup>1</sup>
- There are many pharmacodynamic and pharmacokinetic alterations associated with aging that puts geriatric patients at higher risk for adverse drug events.
- There are studies that have shown that elderly patients have an average of one unnecessary drug per patient, including proton pump inhibitors, central nervous system medications, and vitamin/mineral supplements.<sup>2</sup>
- The Geriatric Mini-Fellowship was designed to provide advanced training for the primary care providers at Providence Medical Group in treating geriatrics. This 4-week fellowship also includes a yearlong improvement project where providers focus on high-risk medication or classes to deprescribe in patients 65 years or older.
  - Focus on the "Four M's": Medication, Mobility, Mentation, What Matters
- This curriculum also includes other interdisciplinary team members (nurses, PharmDs, case managers, physical therapists) to enhance collaboration in order to improve care in this patient population.

## Purpose

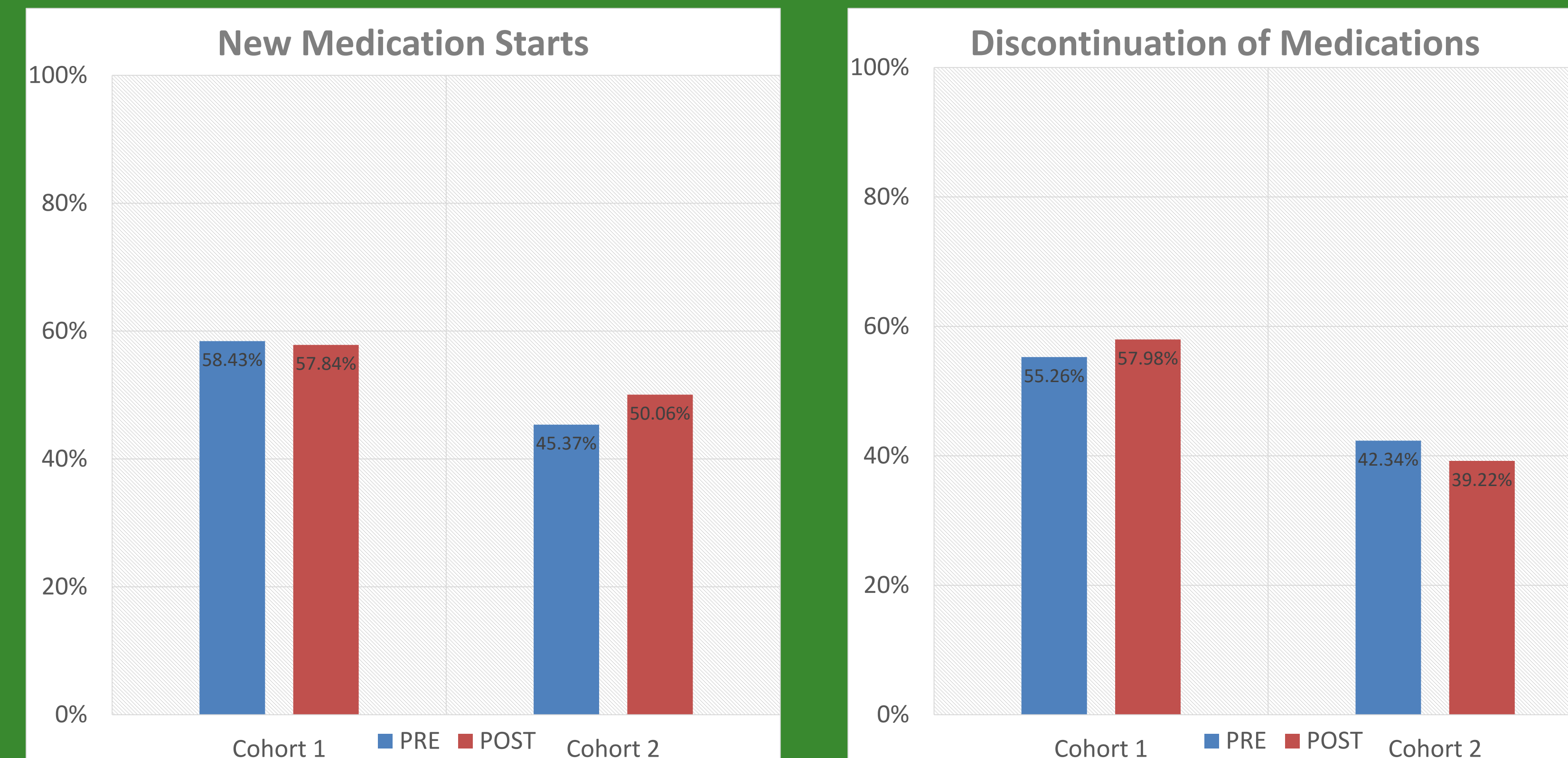
- This project evaluates how medication prescribing has changed quantitatively and qualitatively for primary care providers both pre and post fellowship training compared to their provider colleagues in their respective clinics.

## Study Design

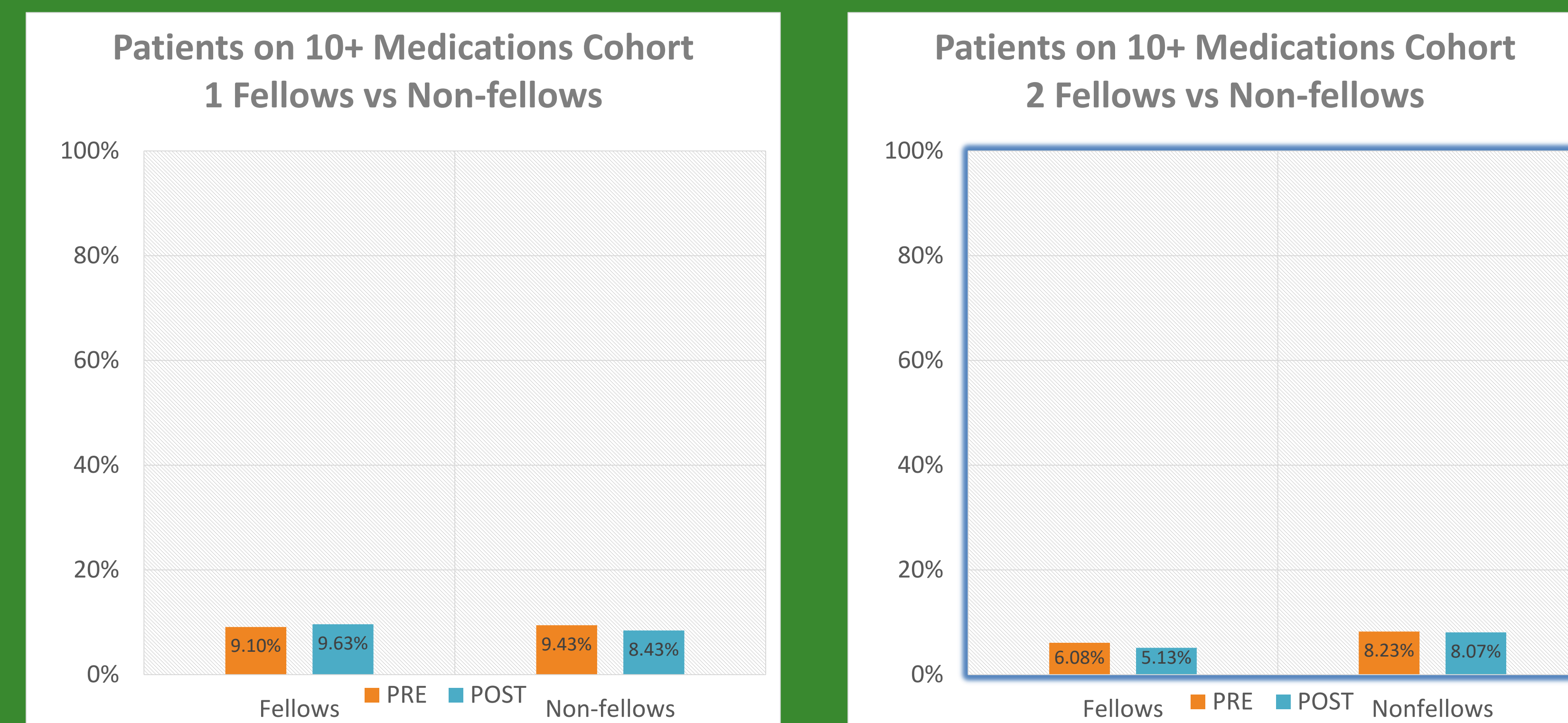
- High-risk medication drug classes that were evaluated for this study
  - PPI's, oral hypoglycemics, benzodiazepines, z-drugs, skeletal muscle relaxants, antipsychotics, TCA's, narcotics, antihypertensives, diuretics, antihistamines, urinary antispasmodics
- Study Period**
  - Fellowship Cohort 1
    - Pre-intervention: Apr 1, 2020 – Mar 1, 2021
    - Post-intervention: May 1, 2021 – Apr 1, 2022
  - Fellowship Cohort 2
    - Pre-intervention: Apr 1, 2021 – Mar 1, 2022
    - Post-intervention: May 1, 2022 – Apr 1, 2023
- Inclusion Criteria**
  - Adults aged 65 years and older
  - Patient of a geriatric fellow
- Primary endpoints**
  - Number of high-risk medications started pre and post period
  - Number of high-risk medications discontinued pre and post period
  - Number of patients on 10+ medications pre and post period
  - Number of ED admissions/hospitalizations pre and post period

# Results

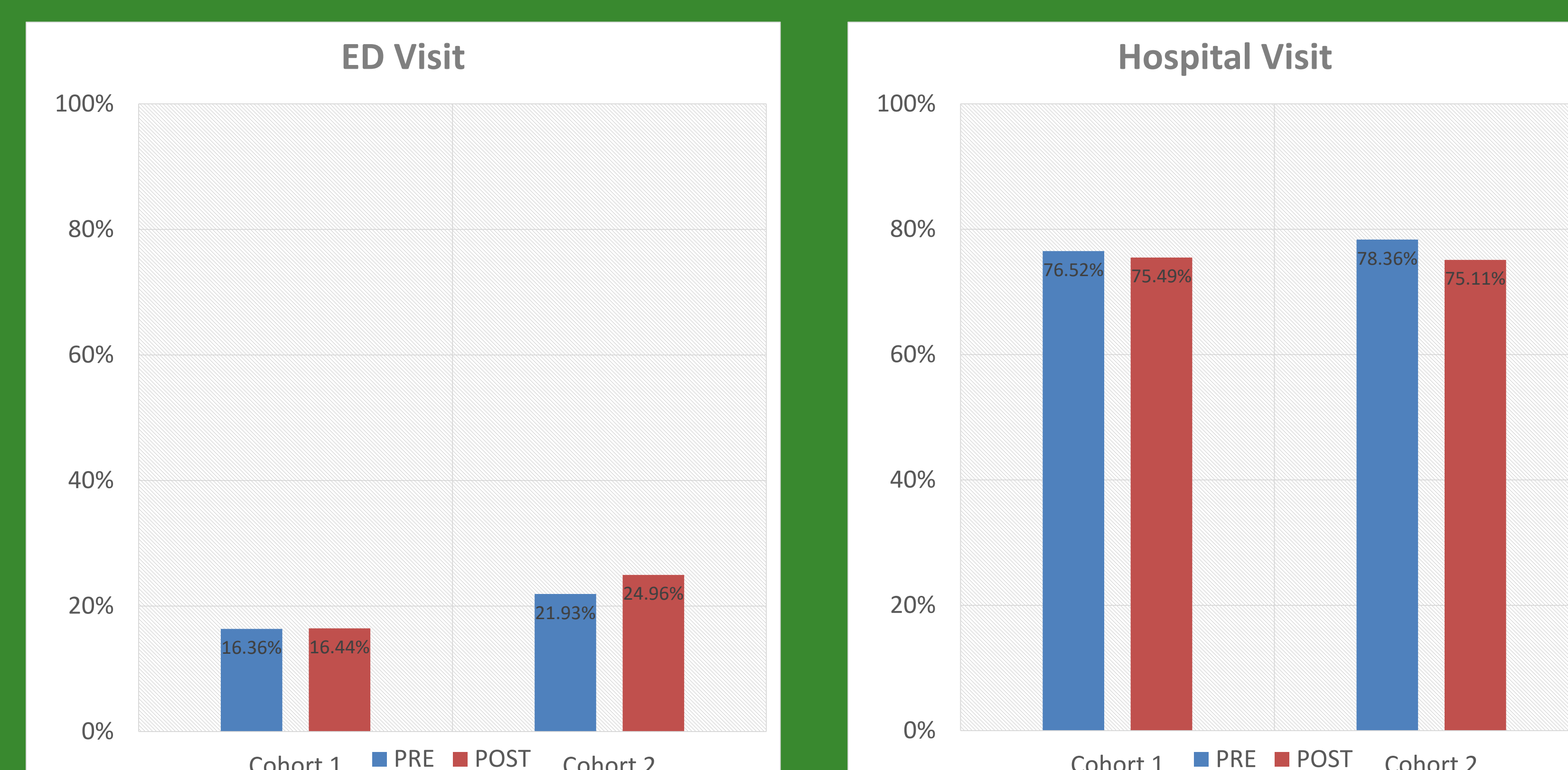
## Medication Starts/Discontinuations



## Patients on 10+ Medications



## ED/Hospital Visit



## Discussion

### Results

#### Medication Starts/Discontinuations

- In Cohort 1, the percentage of high-risk medication new starts decreased after the geriatric mini-fellowship overall by 0.59%. However, in Cohort 2, the percentage of high-risk medication new starts increased overall by 4.69% after the geriatric mini-fellowship.
- For the discontinuation of high-risk medication data point, ideally, we would like to see an increase in the percentage of medications that were discontinued post fellowship. In Cohort 1, we did see this increase by 2.72% after the mini fellowship while in Cohort 2, the discontinuation of high-risk medications decreased by 3.12%.

#### Patients on 10+ Medications

- For our Cohort 1 data, the number of patients on 10+ medications increased by 0.53% in the fellow cohort while the percentage of patients in the non-fellow cohort decreased by 1% after the mini-fellowship.
- In the Cohort 2 data, the percentage of patients on 10+ medications decreased in both the fellow cohort and the non-fellow cohort after the geriatric mini-fellowship by 0.95% and 0.16%, respectively.

#### ED/Hospital Visit

- In both Cohorts 1 and 2, the percentage of ED admissions increased by 0.08% and 3.03%, respectively.
- However, for both Cohorts 1 and 2, the percentage of hospitalizations decreased by 1.03% and 3.25%, respectively, after the completion of the mini-fellowship.
- When evaluating chief complaints for ED visits/hospitalizations, the word "fall" was included in ~5% of the chief complaints for Cohort 1 prescribers and ~7% for the Cohort 2 prescribers.

## Going Forward

- Gather PharmD's input on collaboration with providers that completed the geriatric mini-fellowship
  - Assess medications that the PharmD's are commonly consulted about in the geriatric population
  - Assess ability of PharmD's to deprescribe high-risk medications
  - Identify an areas of improvement in the geriatric mini-fellowship
- Identify common medication classes that prescribed in patients that were seen in the ED/hospital for falls

## References

- Sadowski C. Falls and Fall Prevention. In: Richardson M, Chant C, Chessman K, eds. Pharmacotherapy Self-Assessment Program Geriatrics. ACCP;133-147.
- Steinman MA, Hanlon JT. Managing medications in clinically complex elders. *JAMA*. 2010;304(14):1592. doi:10.1001/jama.2010.1482