



Implementation of a polypharmacy clinic in vulnerable elders (PAVE clinic) within integrated patient aligned care teams (PACT) in Primary Care

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Background: Polypharmacy

Definitions:

- Polypharmacy:** use of medications that are incorrectly dosed, duplicative, or not clinically indicated¹
- Potentially Inappropriate Medications (PIMs):** medications with an ↑ risk of adverse effects in elderly patients²

Prevalence in the Elderly:

- Elderly patients are vulnerable to unnecessary medication utilization
 - Longer life expectancy, ↑ chronic disease and severity
 - ↑ risk in ambulatory care settings and nursing homes³
- 58.6% in the community took ≥ 1 unnecessary prescription⁴
- 37.1% of men and 36% of women between 75-85yo took ≥ 5 chronic prescriptions⁵

Risks of Polypharmacy in the Elderly:

- Polypharmacy ↑ risks for drug interactions, medication non-adherence, falls, cognitive and functional impairment, and ↑ mortality
- 4.3 million healthcare visits attributed to an adverse drug event (ADE)³
- 35-40% of elderly patients have experienced an ADE³

Background: Pharmacist Interventions

- Integrated pharmacy run initiatives may ↑ medication appropriateness, ↓ number of PIMs, ↑ patient satisfaction
- Pharmacist interventions and interdisciplinary approaches → favorable effects on therapeutic appropriateness, adherence, safety, and hospitalizations^{6,7}

	Hanlon et al. 1996	Mirk et al. 2016
Setting	Durham, NC VAMC General medicine clinic	Atlanta, GA VAMC Pharmacist run outpatient clinic
Population	N=208, >65yo with ≥ 5 meds	n=28, ≥85yo with ≥ 10 meds
Intervention	RCT Met w/ CPS met during clinic visit 1 year follow-up	Pilot quality improvement study IMPROVE Model
Outcome Measures	MAI, HR-QOL, ADE, adherence, ↓ in number of medications	Number of meds discontinued, PIMs, cost savings, patient satisfaction
Results	<ul style="list-style-type: none"> ↑ MAI ($p=0.002$) No significant difference: <ul style="list-style-type: none"> ADE, HR-QOL, compliance, # of meds 	<ul style="list-style-type: none"> Average ↓ = 1.7 medications PIMs ↓ = 14% Rx cost savings = \$64/month/veteran 93% patient satisfaction

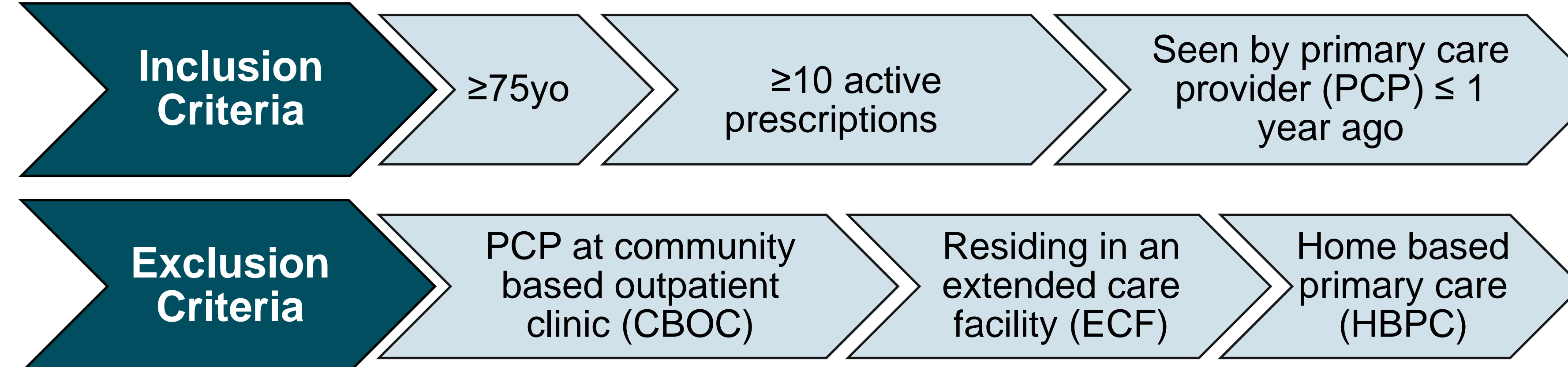
CPS= Clinical pharmacy specialist, HR-QOL= Health related quality of life, MAI= medication appropriateness index, RCT= Randomized controlled trials, RX= prescription, VAMC= Veterans Affairs Medical Center

Purpose

The purpose of this study is to implement and evaluate the outcomes of a innovative polypharmacy clinic targeting elderly patients within the primary care PACT clinics at the VASLCHCS.

Methods

Selection Criteria:



Design:

- Provider survey**
- Patient recruitment**
 - Opt-out letter
 - High risk patients identified in provider panels
 - Clinic consult for referrals
- Pre-clinic phone call**
- Phone, home visit, or in-person clinic appointment to address**
 - Barriers to treatment, PIMs, MAI, compliance, drug interactions, and screening for health literacy
- Provide recommendations, patient satisfaction survey, follow up**

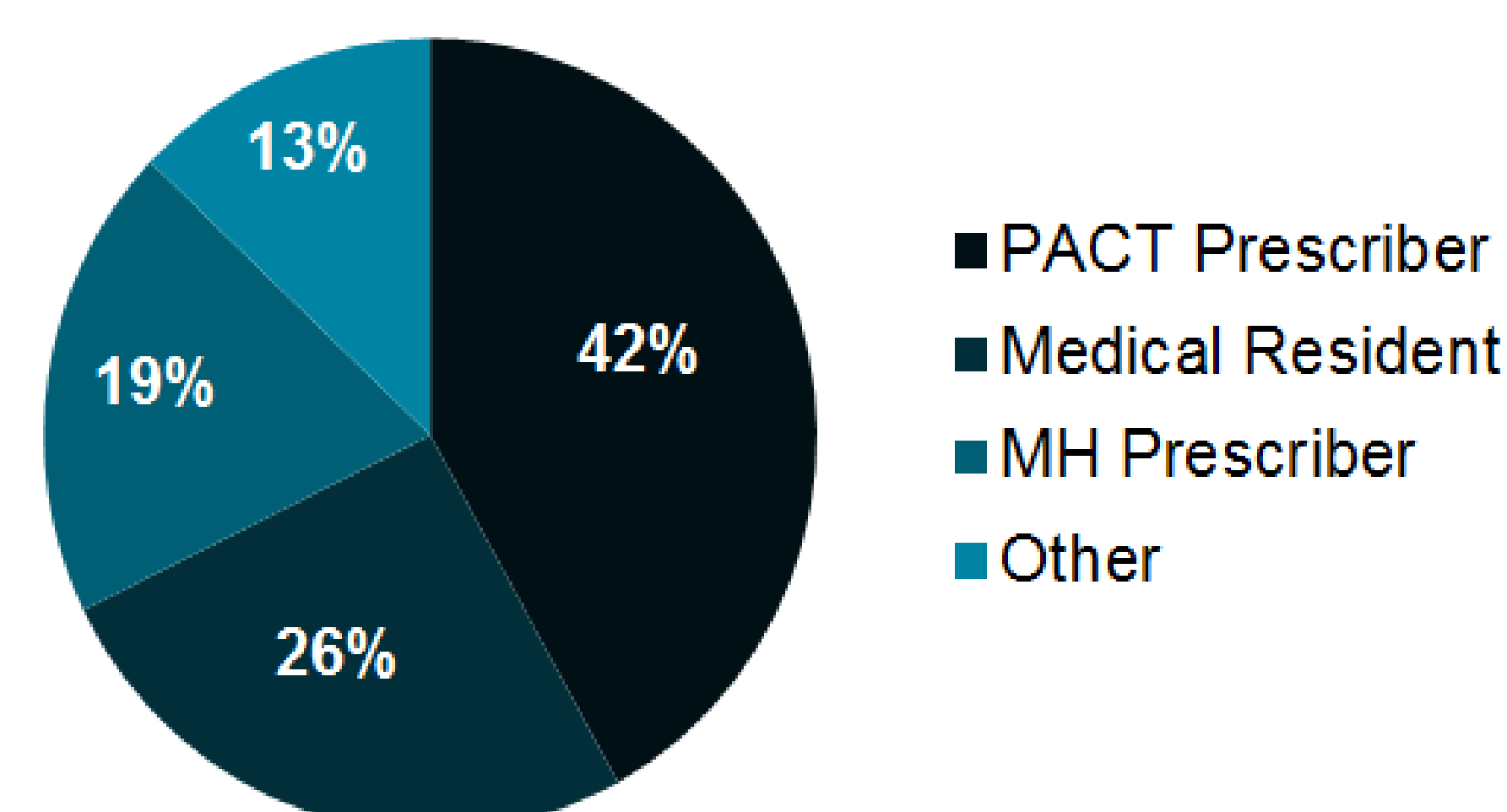
Outcomes

Primary	Secondary	Tertiary	Safety Monitoring
<ul style="list-style-type: none"> ↓ PIMs ↓ meds 	<ul style="list-style-type: none"> ↑ MAI Drug cost savings ↑ compliance Patient satisfaction 	<ul style="list-style-type: none"> ↓ inappropriate anticholinergic antidepressants ↓ inappropriate antihistamines ↓ sedative use Number of interventions Provider perceptions 	<ul style="list-style-type: none"> # falls # hospital admissions Noticeable ↓ in health

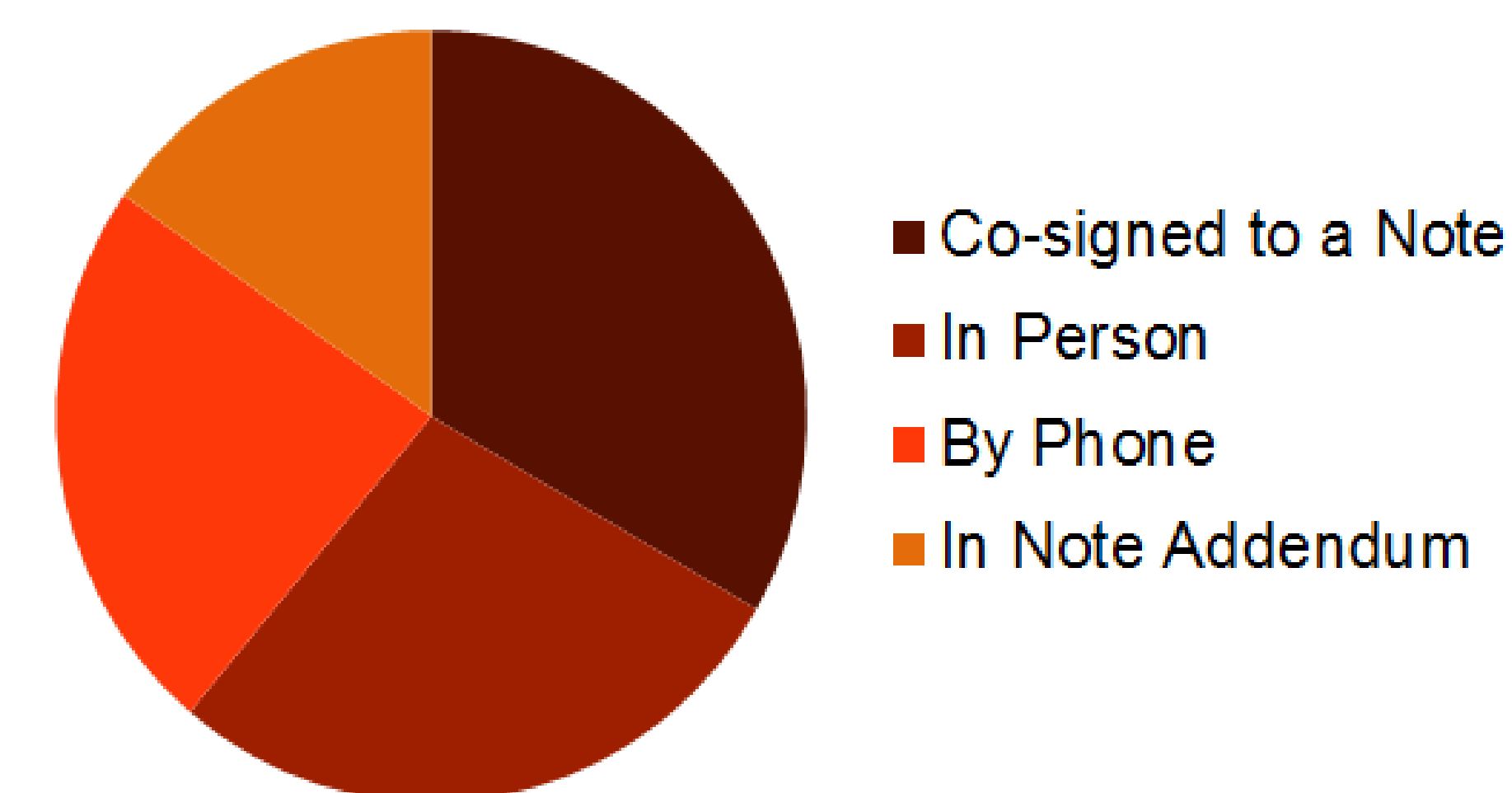
Preliminary Results

- Survey to outpatient providers to understand perceptions and communication preferences
- As of 03/27/2017 n=31

Type of Provider



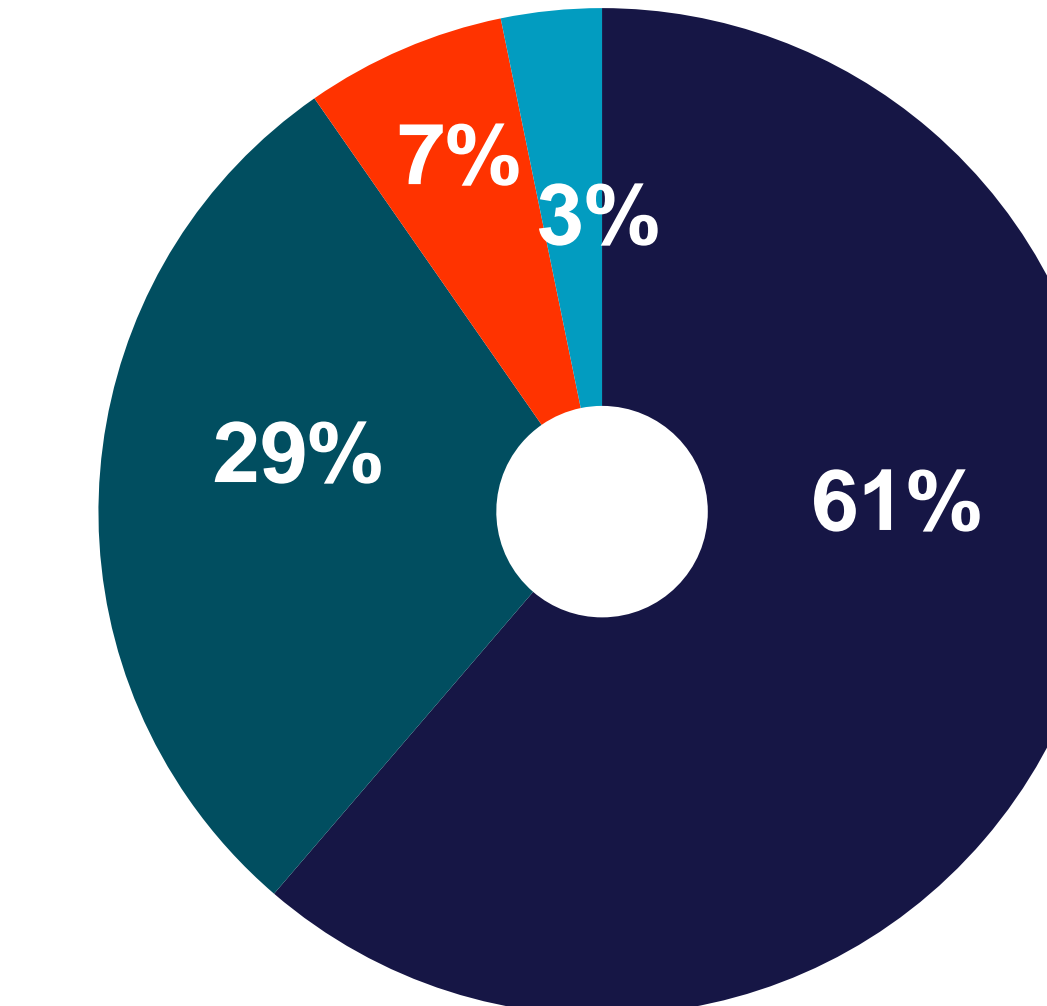
Preferred Communication



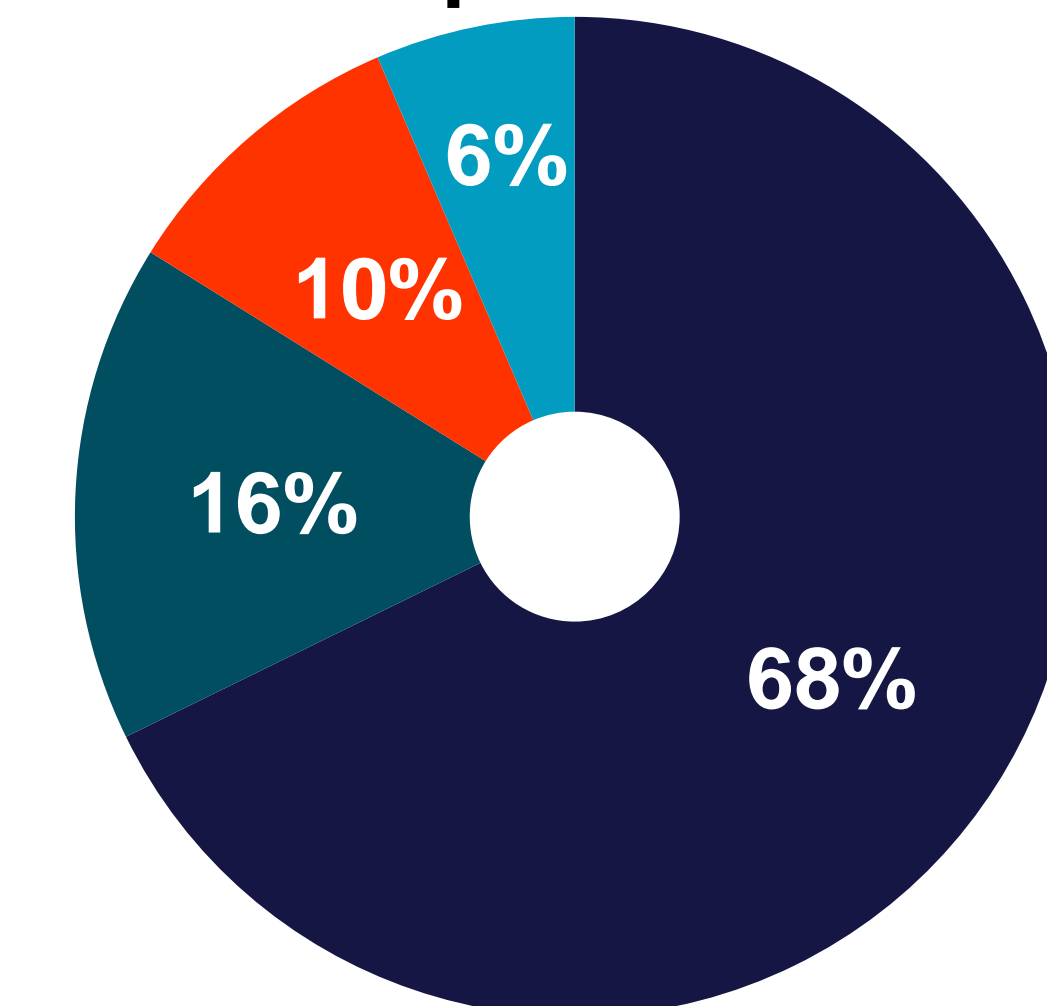
Preliminary Results

"How comfortable are you with a clinical pharmacist reviewing your patient's medications at a separate appointment and..."

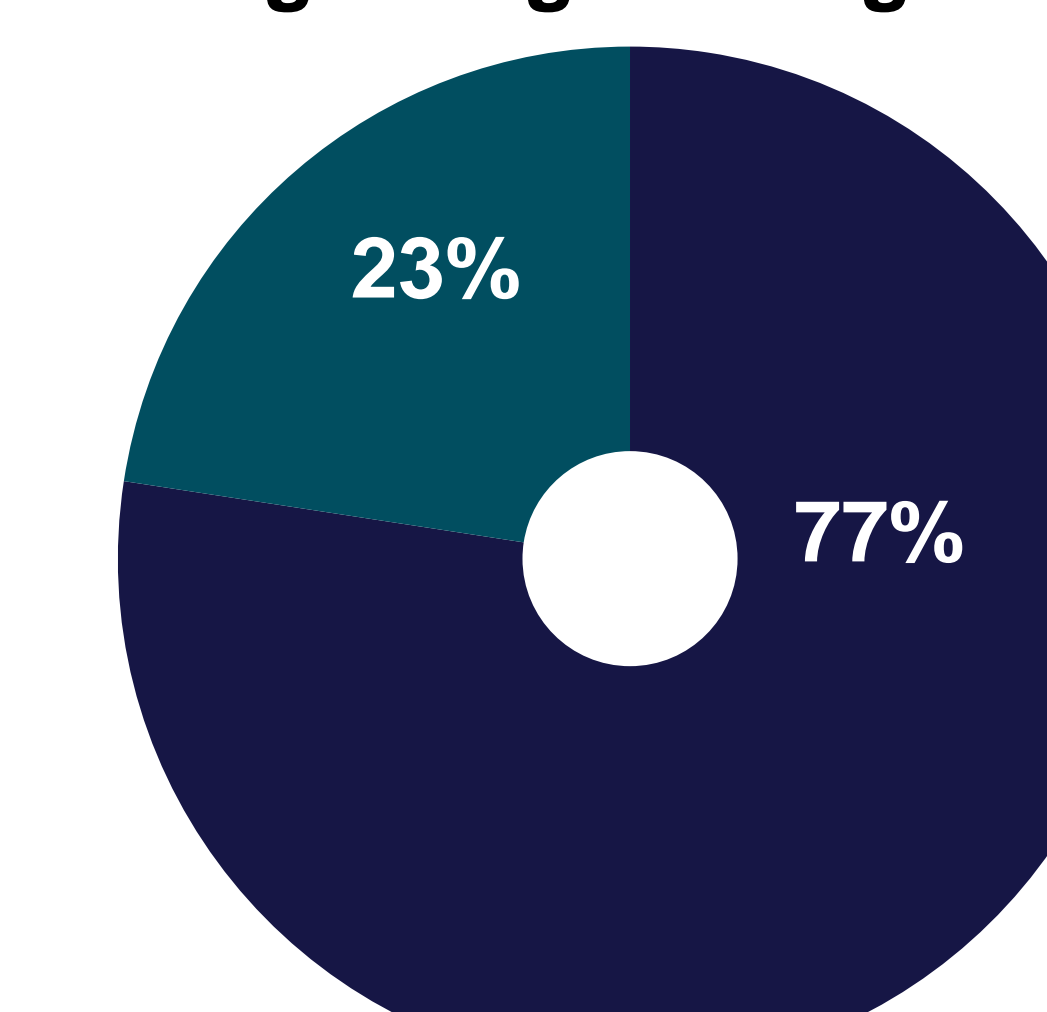
1) Stopping medications with clear harms



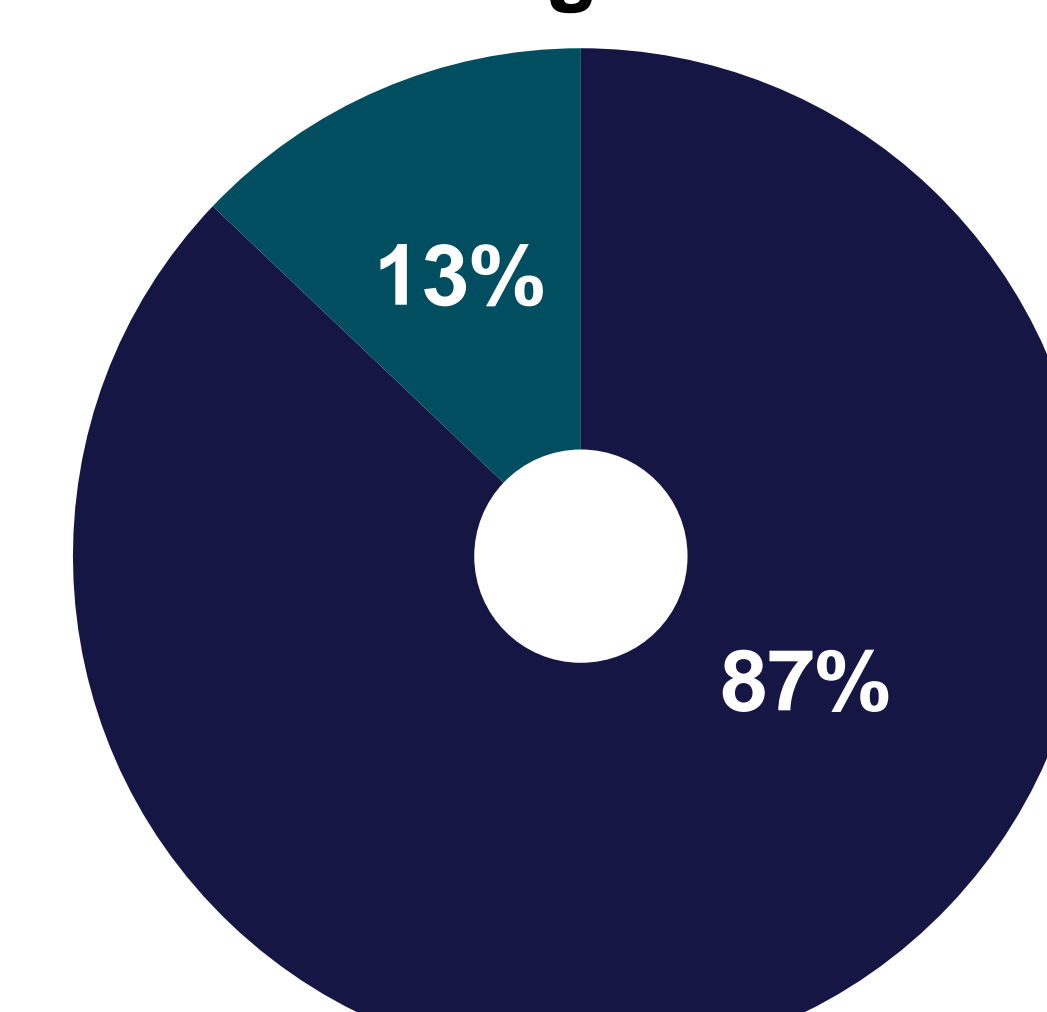
2) Change doses/frequency based off patient factors



3) Provide recommendations regarding starting meds



4) Ordering tests for lab monitoring



Future Direction

- Continue to recruit patients
- Provide education to providers
- Incorporate future PGY-2 mental health residents as a longitudinal opportunity
- Collaborate with G-HELP home based services to provide at home visits

References/Disclosures

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