

Potentially Inappropriate Medications: Description of a Pharmacist-led Educational Intervention in a Community Pharmacy

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Key Findings

In a three-month study period:

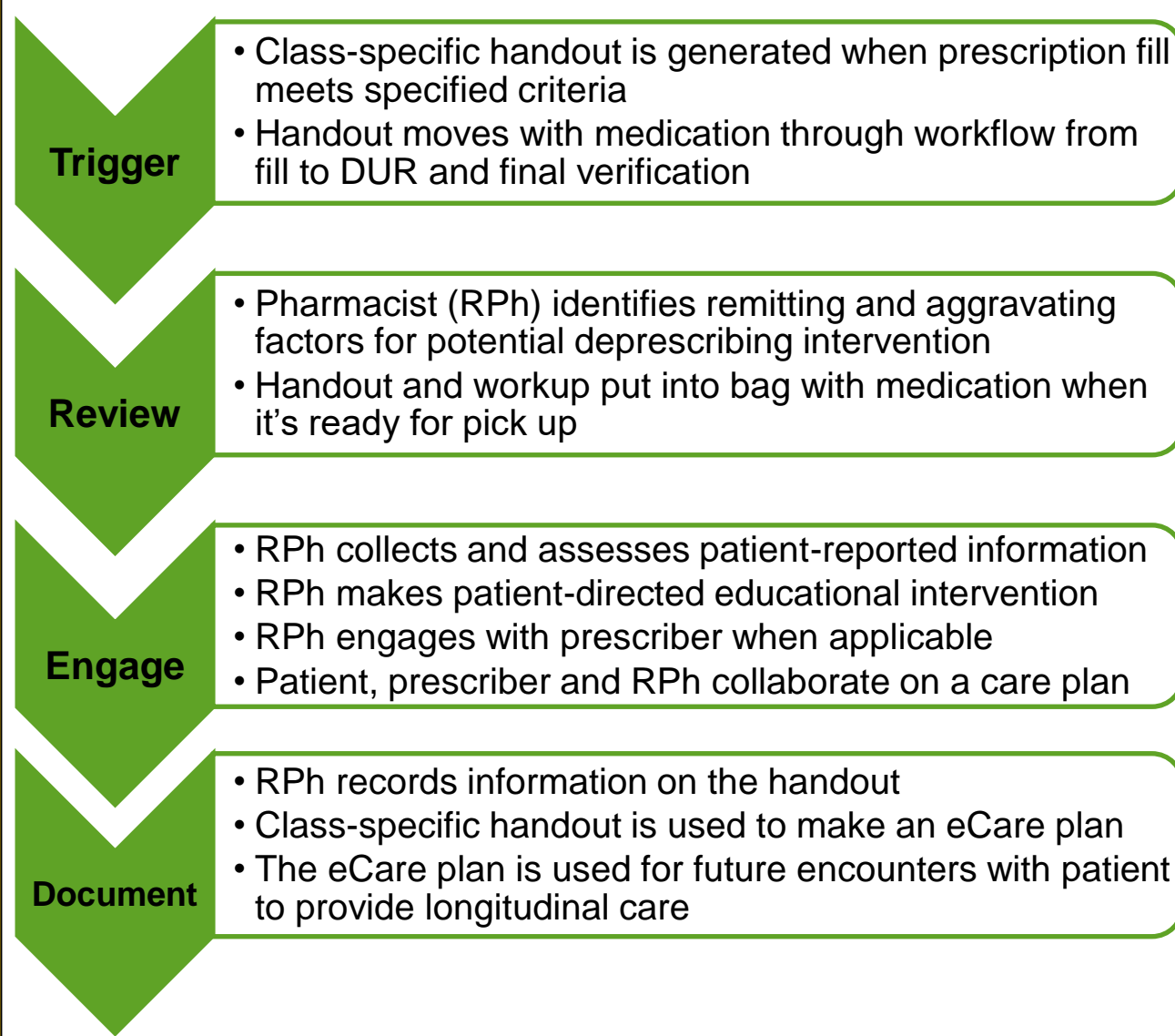
- We performed 197 interventions on 64 older adults
- We made 86 recommendations: 72 to the patient and 14 to the prescriber. Refusal rate was 4.7%.

Background

- **Potentially Inappropriate Medications (PIMs):** drugs that should be avoided in the elderly in most circumstances
- PIM use among older adults is associated with negative health consequences and can impact quality of life
- Our project focused on 1st generation antihistamines, NSAIDs, sulfonylureas and sedative-hypnotics

Methods

- **Setting:** Rural, independent community pharmacy
- **Design:** Descriptive, single-group analysis



Results

Table 1. Demographics

Demographic (N = 64)	N
Number of Females (%)	38 (59.3%)
Mean Age (Range)	73.5 (65-93)
65-69 years	26
70-79 years	27
80-89 years	9
90-99 years	2
Mean Medications (Range)	7.8 (1-17)
1-2 medications	5
3-4 medications	4
5-7 medications	22
8-10 medications	20
11-13 medications	10
14+ medications	3

Table 2. Interventions by drug class

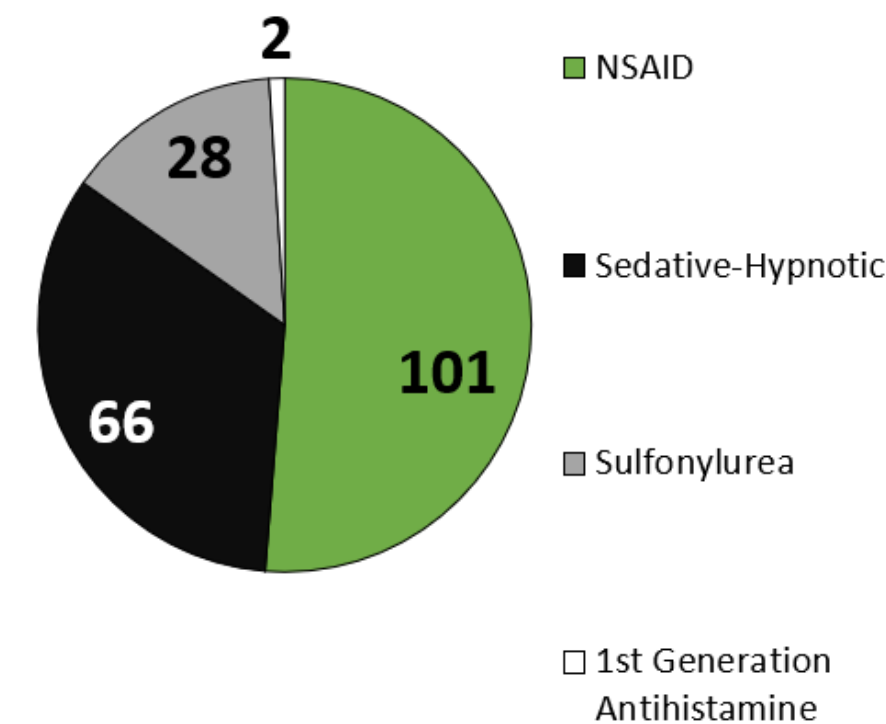
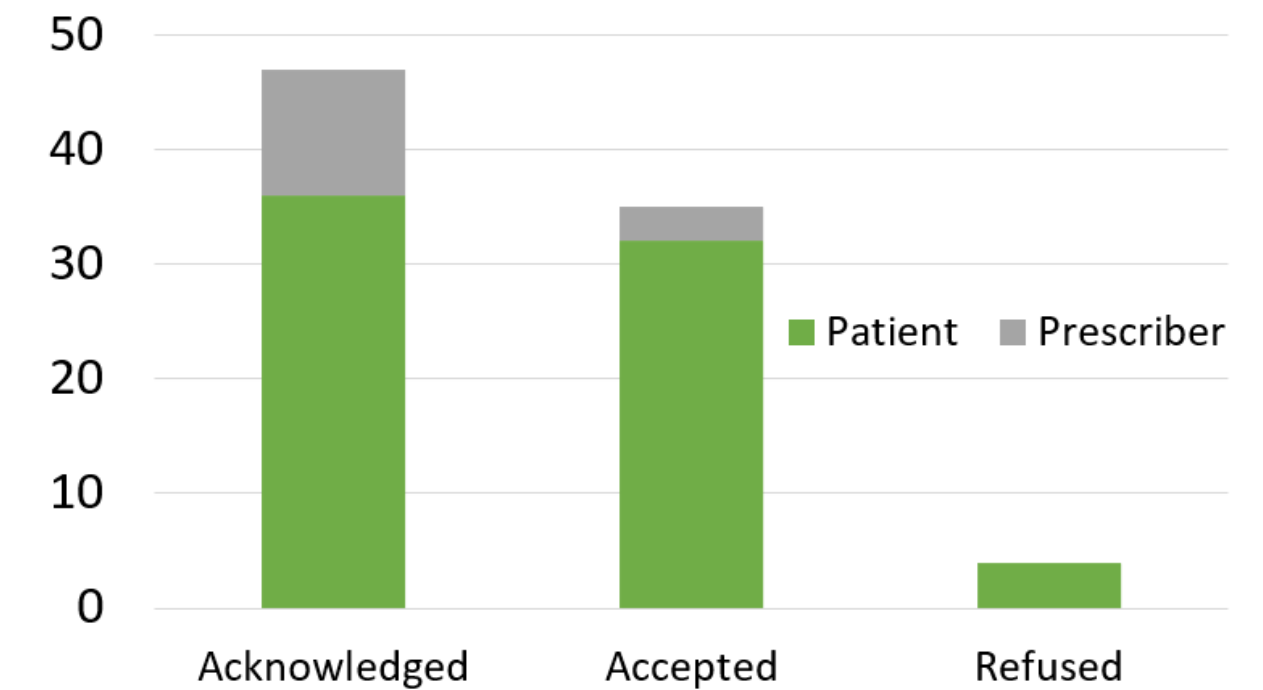


Table 3. Types of interventions

Type of Intervention (total = 197)	Frequency
Medication side effects education	59
Chronic disease process education	23
Medication monitoring education	23
Over-the-counter medication education	19
Education about risk of fall	18
Prescribed medication education	15
Education about sleep hygiene behavior	11
Recommendation to start over-the-counter medication	10
Exercise education	7
Recommendation to discontinue medication	4
Recommendation to start prescription medication	4
Diabetes Mellitus diet education	2
Medication efficacy education	2

Results

Figure 1. Responses to recommendations



Discussion

Implications

- Class-specific triggers facilitated educational interventions
- Almost all recommendations were accepted or acknowledged
- Prescribers acknowledged they would discuss at next visit
- Many patients were open to pharmacist-led education on PIMs

Facilitators:

- RPh knowledge on multiple disease states and motivational interviewing techniques
- Semi-private and private counseling areas

Barriers

- False positives: Aggrenox, aspirin 81 mg, topical diclofenac, single dose benzodiazepines for MRI
- Patient engagement more difficult at drive-thru and by phone

Limitations

- Single site, no comparison group

Next Steps

- Add more PIMs, such as opioids and alpha-1 blockers
- Discussion of PIMs service at monthly RPh meeting
- Study discontinuation rates of PIMs as a primary outcome