Factors Contributing to Improved Adherence Rates Following a Clinical Pharmacist Intervention

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BACKGROUND

- Medication-related problems (MRPs) are prevalent in older adults and negatively impact health outcomes.

- The rate of one MRP, medication non-adherence, averages 50% in older adults.

- The *Individualized* Medication Assessment and Planning (*i*MAP) tool was developed for clinical pharmacists to classify MRPs, including non-adherence, in older adults (Table 1).

- In a prior study, clinical pharmacists worked collaboratively with primary care physicians to identify and resolve MRPs using the *i*MAP tool. In this study, rates of medication non-adherence decreased from 41% to 23% over 6-months.

Table 1.
Medication-related problems (MRPs)
1. Drug therapy needed
2. Dose too low
3. Medication monitoring needed
4. Inappropriate medication use
5. Dose too high
6. Adverse drug event present
7. More affordable alternative available
8. Suboptimal regimen
9. Non-adherence

OBJECTIVE

To identify factors contributing to improved adherence rates following a clinical pharmacist intervention

METHODS

Design: Sub-analysis of adherence data from a prospective 6-month pilot study

Procedures:
- Identified all drugs at baseline and 3 months for which patients were non-adherent; we chose these measures because we wanted to allow observation of subsequent changes in non-adherence over the study period
- Documented patterns of non-adherence over the 6-month study
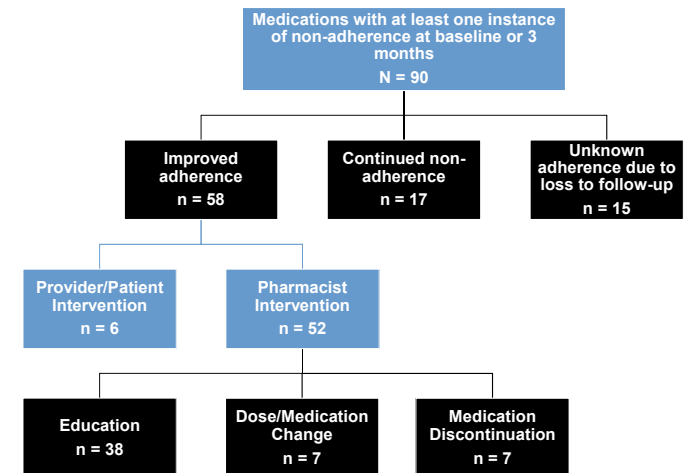
Statistical Analysis:
- Descriptive statistics were used to characterize our findings at the drug level

RESULTS

- Baseline characteristics:
  - 64 study participants
  - Mean age 75. 4 (range 65-93) years
  - 67% white, 58% female
  - Average 13.9 (range 5-31) medications

- Of the 90 medications assessed as non-adherent at baseline or 3 months, 15 medications could not be analyzed due to loss to follow-up.
- 75 medications were assessed for impact of clinical pharmacist interventions (Table 2).

Table 2. Results		
Medication Non-adherence (N=75)		
	Improved adherence (n = 58)	**Continued non-adherence (n = 17)**
PharmD education (n = 54)	38 (70%)	16 (30%)
PharmD dose or medication change (n = 8)	7 (87.5%)	1 (12.5%)
PharmD medication discontinuation (n = 7)	7 (100%)	0 (0)
Provider or patient medication discontinuation (n = 6)	6 (100%)	0 (0)

Medications with at least one instance of non-adherence at baseline or 3 months — N = 90

- Improved adherence n = 58
- Continued non-adherence n = 17
- Unknown adherence due to loss to follow-up n = 15

Improved adherence n = 58:
- Provider/Patient Intervention n = 6
- Pharmacist Intervention n = 52
  - Education n = 38
  - Dose/Medication Change n = 7
  - Medication Discontinuation n = 7

CONCLUSIONS AND FUTURE DIRECTIONS

- The adherence rate was 77% higher following clinical pharmacist intervention.

- Clinical pharmacist intervention, notably providing education, may improve medication adherence rates among older adults.

- Changes in medications and doses may also facilitate medication adherence.

- Additional analyses may identify specific medications for which adherence was improved to assess potential impact on outcomes.

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