REDUCING INAPPROPRIATE MEDICATIONS IN THE OLDER PRIMARY CARE POPULATION

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INTRODUCTION

- 65 years and older: population increase from 40 million (2010) to 71 million (2030) (United States Department of Health and Human Services, 2010).
- Polypharmacy/ inappropriate prescriptions are BIG problems in this population (Charlesworth, Smit, Lee, Aramadhan, & Odden, 2015).
- Polypharmacy prescription of too many medications for an individual patient
- Potentially inappropriate medications (PIMs) = prescriptions with dangerous age-related/ drug/drug/ drug-disease interactions.
- Pharmacodynamic/ kinetic changes, co-morbidities, and complex medication regimens = high risk for an adverse drug event (ADE) (Moriarty, Bennett, Cahir, Kenny, & Fahey, 2016).
- Mismanaged polypharmacy resulted in 1.3 billion dollars of avoidable healthcare costs in 2012 (Attkenn & Valkova, 2013).

Increased focus on inappropriate medications that can be safely discontinued → strengthen the medication review process and improve patient outcomes.

- The Screening Tool of Older Persons’ Prescriptions (STOPP) aids in the identification of PIMs (O’Mahony et al., 2015).
- More sensitive than other medication review tools (i.e., BERS’ list)
- Identifies more medications associated with ADEs ( Garcia- Gollarte et al., 2014; Hill et al., 2013).

Purpose Statement:

For primary care patients, aged 65 to 79 years (P), does provider education of the STOPP criteria (I), decrease the number of patients with PIMs in the medical record in a mid-Western primary care clinic (O), within a 3-month timeframe (T)?

The goal of the project was to determine if an education intervention reduced the incidence of PIMs in primary care patients’ medical records.

Objectives:

1. 15% reduction in the number of sample patients with a PIM in their medical record, six weeks after provider education;
2. 50% of providers within the clinic in attendance at the educational session, as evidenced by a sign in sheet, after the initial chart review.

MATERIALS AND METHODS

DESIGN: longitudinal quality improvement project to decrease the percentage of patients with a PIM in the medical record by improving provider knowledge of the STOPP criteria

- SETTING: southeast MO primary care; nine providers in family and internal medicine
- TARGET POPULATION: purposeful, convenience sample of patients seeking care at the clinic
- INDIVIDUAL DEMOGRAPHICS: age, gender, insurance, and race

Baseline Chart Review (n = 187)

Provider Education

Follow-Up Chart Review (n = 191)

Materials and methods for PIMs

Assessed for PIMs (according to the STOPP benchmarks) present in the patient medical record (six weeks retrospectively) meeting inclusion criteria:

- ≥ 65 but ≤ 79 years
- ≥ 1 prescription medication
- Provider attendance
- “(as needed)” medications included in the analysis

- Interactive, multimedia presentation
- Topics: significance of polypharmacy and PIM, introduction to the criteria, benefits for the population and providers, utilization of the benchmarks
- Reference pocket books for use in the session / daily practice

RESULTS

- Analysis of PIMs & Gender:
  - Reduction in PIMs in the male sample between baseline (n = 31) and follow-up (n = 27)
  - χ² (1) = 0.6, p = 0.44, phi (Φ) of .1 = small, clinically significant reduction between male gender and PIMs
  - Female: decrease in PIMs between baseline (n = 67) and follow-up (n = 64): not statistically or clinically significant χ² (1) = 0.35, p = .56, phi (Φ) = .04

- STOPP Benchmarks:
  - Types of PIM most often identified not statistically or clinically significant between groups χ² (1) = 24.6, p = .79, the phi (Φ) of .3 indicates a moderate, clinically significant difference in benchmarks / PIM identification
  - Benzodiazepine prescriptions for greater than four weeks’ therapy” decreased by six cases between baseline (n = 21) and follow-up chart review (n = 15)
  - “Duplicate medications from the same drug class” fell by 3 cases between baseline (n = 7) and follow-up(n = 3)

- CPT Code and PIM:
  - Small, clinically significant decrease in PIM for visits coded, *99397*
  - χ² (6) = 2.25, p = .89, phi (Φ) of .10

*Periodic comprehensive preventive medicine evaluation & management with history and exam

CONCLUSIONS

- To apply the criteria in clinical practice, reduce PIMs, and improve patient safety, providers need education on the application and rationale for the STOPP criteria
- Primary care providers are in position to identify PIMs, evaluate the harm/ benefit ratio of the medication and prescribe potentially safer medications.
- Education targeting PIMs has potential to improve patient outcomes and promote safe prescribing practices.
- Future educational opportunities for multiple disciplines including nursing, pharmacy and social workers would encourage a team approach to care in a multitude of settings.
- Incorporating all members of the patient care team, opportunities to identify PIMs grow and a greater level of patient monitoring obtained.

REFERENCES


ACKNOWLEDGEMENTS

The project director would like to thank Dr. Gina Oliver (Committee Chair), Dr. Ian Sherman (2nd reader), and Dr. Kimberly Keser (3rd reader and site contact). mkeys19@mail.missouri.edu