

# Pharmacist Interventions Involving Patient Outreach: Early Findings of Patient Outcomes in Older Adults

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The research reported on this poster was supported by the Health Resources and Services Administration. The investigators retained full independence in the conduct of this research.

## PURPOSE AND BACKGROUND

The purpose of this study was to investigate the impact of pharmacist interventions on older adult patients in primary care.

Activities during this study were accomplished as part of the Lehigh Valley Hospital Geriatrics Workforce Enhancement Program (GWEP), a program funded through a cooperative agreement from the Health Resources and Services Administration (HRSA).

Beginning in April 2017, a pharmacist was incorporated into the GWEP program already consisting of nurse care managers, community health workers, family and internal medicine residency practices, and other community partners.

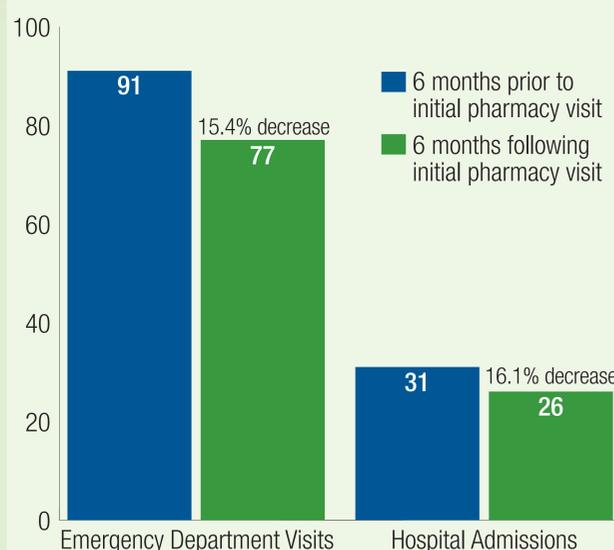
## METHODS

- A one-group pretest-posttest design was implemented to compare health care utilization before and after initial patient outreach performed by the clinical pharmacist.
- **Primary outcomes:** Measurement of ED visits and hospital admissions in older adult patients who were engaged at least 6 months in home visit program.
  - Intervention period occurred from Sept. 1, 2017 through Aug. 31, 2018. Data was collected from 6 months prior to (March 1, 2017) through 6 month post (Feb. 28, 2019) the intervention period. Patients seen by a pharmacist prior to Sept. 1, 2017 were excluded.
- **Secondary outcomes:** Measurement of costs avoided by pharmacist interventions. Estimates of cost avoidance are based on previous studies<sup>1</sup> and inflation adjustments.<sup>2</sup>
  - Pharmacist interventions collected from Sept. 1, 2017 through Aug. 31, 2018.

## RESULTS

99 home visits and 210 telephone outreaches in 77 older adult patients were performed during the study period.

### Comparison of Emergency Department Visits and Hospital Admissions following Outpatient Pharmacist Outreach



### Pharmacist Interventions

Total cost avoidance from pharmacist interventions is estimated to be \$219,302.75 annually.

DESCRIPTION OF INTERVENTION	NUMBER (PERCENTAGE)
Provide Information Only	274 (26%)
Other	170 (16%)
Comprehensive Medication Review	148 (14%)
Prevent or Manage an ADE	109 (10%)
Discontinue a Drug Not Indicated	108 (10%)
Adjust a Dose of Frequency	87 (8%)
Recommend Vaccination	48 (5%)
Manage an Untreated Diagnosis	36 (4%)
Duplication of Therapy	35 (3%)
Manage a Drug Interaction	21 (2%)
Therapeutic Drug Monitoring	6 (1%)
<b>TOTAL</b>	<b>1,042</b>

## LIMITATIONS AND BARRIERS

- Although the results are captured based upon the time of initial pharmacist encounter, the contributions of other disciplines play a key role in the overall care of the patient.
- Recent hospital admissions or emergency department visits can be the inciting incident which prompts enrollment into the GWEP program. An admission or ED visit which triggered a GWEP referral might have impacted the results of the primary outcome.
- A reduction in pharmacist staffing during the last 3 months of the intervention period and hospital staffing responsibilities throughout the intervention period may have also limited potential opportunities for further patient involvement.

## CONCLUSION

- Clinical pharmacists can help improve outcomes of older adult patients by identifying and resolving medication-related problems, providing patient and caregiver education, and collaborating with clinicians to implement drug therapies.
- Early investigations show pharmacist home visits and interventions, in collaboration with the nurse and CHW, may reduce ED visits and hospital admissions, and increase cost avoidance.

## DISCLAIMER

This demonstration project is funded by the Geriatrics Workforce Enhancement Program grant awarded by the U.S. Department of Health and Human Services (USDHHS), Health Resources and Services Administration (HRSA). The views, opinions, and content expressed in this presentation do not necessarily reflect the views, opinions, or policies of HRSA, or the USDHHS.

## REFERENCES

1. Lee AJ, Boro MS, Knapp KK, Meier JL, Korman NE. Clinical and economic outcomes of pharmacist recommendations in a Veterans Affairs medical center. *Am J Health Syst Pharm.* 2002 Nov 1;59(21):2070-7.
2. U.S. Bureau of Labor Statistics. "CPI Inflation Calculator." [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm) (accessed June 1, 2018).