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Kyle O'Brien PharmD

Lehigh Valley Health Network, Kyle.O'Brien@lvhn.org

Kristin M. Held PharmD, BCOP

Lehigh Valley Health Network, Kristin_M.Held@lvhn.org

Jennifer E. Macfarlan MPH

Lehigh Valley Health Network, jennifer_e.macfarlan@lvhn.org

Elie Jabbour PharmD, MBA

Lehigh Valley Health Network, Elie.Jabbour@lvhn.org

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Impact of a Transition of Care Pharmacy Program on a Medical-Surgical Unit on 30-Day Readmission Rates

Kyle O'Brien, PharmD; Kristin Held Wheatley, PharmD, BCOP; Jennifer Macfarlan, MPH; Elie N Jabbour, PharmD, MBA
Lehigh Valley Health Network, Allentown, PA

PURPOSE

The purpose of this study is to compare 7- and 30-day readmission rates, emergency department (ED) revisit rates, and length of stay for two cohorts of patients: (1) patients that had a medication history performed by a pharmacist and (2) patients that received usual care. The findings from this study will be used to further determine the role of a pharmacist conducting medication histories at Lehigh Valley Hospital (LVH).

BACKGROUND

- Preventable readmissions following recent discharge may result from actions taken or omitted during a hospital stay.
- An area where action can be taken to prevent readmissions is decreasing the amount of medication discrepancies between a patient's home medication regimen and the prescribed inpatient medication regimen.
- At LVH, prescribers (MD, DO, CRNP, PA), nurses (RN), or medication reconciliation pharmacy technicians (MRT) perform a medication history when a patient is admitted to the hospital.
 - Initial review of medication histories shows a high percentage of errors when medication histories are performed by prescribers and RNs.
- When compared to nurses or physicians, pharmacists are able to obtain a more accurate medication history from patients with less medication discrepancies that potentially can lead to harmful medication errors.
 - Pharmacist involvement may lead to fewer discrepancies, a decrease in 30-day readmissions, less revisits to the ED and a shorter length of stay.
- This study will evaluate the impact of a pharmacist performing inpatient medication histories and compare length of stay, 7- and 30-day readmission rates and ED revisit rates between time periods when a pharmacist completed medication histories and usual care.

STUDY DESIGN

- Retrospective chart review of two patient cohorts: (1) patients who had a medication history performed by a pharmacist and (2) patients who had a medication reconciliation performed via usual care.
- **INCLUSION CRITERIA**
 - Patients discharged from a single medical/surgical unit
 - **Cohort 1** – Patients discharged between September 1, 2017 and September 30, 2017
 - **Cohort 2** – Patients discharged between September 1, 2016 and September 30, 2016
- **EXCLUSION CRITERIA**
 - Medication reconciliation was performed by a MRT
 - Patient discharged to skilled nursing facility or hospice care
 - Patient admitted in previous 30 days from start of study period for each cohort
 - Patient transferred to another hospital
 - Patient died before discharge
- The primary objectives are to compare 30-day readmission rates and ED revisit rates during a time in which a pharmacist conducted a medication history compared to a time of usual care.
- **Secondary objectives**
 - Compare the length of stay and 7-day readmission rates for patients during a time in which a pharmacist conducted a medication history compared to a time of usual care.

METHODS

- Electronic medical records for patients discharged from a single medical/surgical unit during the specified time periods will be reviewed.
- Data to be collected for patients in each cohort will include:
 - Patient's age, gender, admission date, discharge date, length of stay, ED visit date and readmission risk score (if applicable).
- **Statistical analyses**
 - Chi-Square Test of Independence will be performed to determine whether an association exists between readmission and ED revisit rates and the provider obtaining the medication history. If the result is statistically significant, pairwise comparisons will be performed to see which specific groups are different from each other.
 - ANOVA will be utilized to evaluate whether length of stay differs between cohorts. If the result is statistically significant, pairwise comparisons will be done to see which specific groups are different from each other.

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