Evaluation of Pharmacist-Led Transitions of Care (TOC) Discharge Pilot Program for Reducing 30-day Readmission Rates in Patients with Chronic Obstructive Pulmonary Disease (COPD)

Ann Tong  
*Providence*

Hyesoo Chae  
*Providence Portland Medical Center, hyesoo.chae@providence.org*

Addison Pang  
*Providence, addison.pang@providence.org*

Tony Lucchi  
*Providence, anthony.lucchi@providence.org*

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Inclusion Criteria

COPD

Rates

Readmission

Primary Endpoints

Rates of 30-day readmission and 30-day ED visits for admitted patients with COPD

Secondary Endpoints

• Number and nature of pharmacy interventions
• Compliance with guideline-directed medical therapy (GDMT)

BACKGROUND

• COPD is the fourth leading cause of both death and hospital readmissions in the U.S.
• Hospitalization for COPD exacerbation is associated with an increased risk of 1-year mortality.
• 86% of COPD mortality occurs among patients 65 years old or older with the highest incidence among those older than 85 years old.3,4
• COPD incurs a total economic cost of approximately $50 billion annually.5
• Comprehensive and collaborative pharmacy-led transitions of care (PTC) services, which involves admission medication history, discharge medication reconciliation, and discharge medication counseling, have demonstrated a significant impact on 30-day readmissions at several health-systems.6,7
• Providence Portland Medical Center (PPMC) has identified an opportunity to improve PTC services for COPD patients in the hopes to decrease readmission rates.

METHODS

Study Design

• Single-center, tertiary care (500-bed) medical center
• Retrospective chart review to collect baseline data on control group
• Prospective chart review to collect data on intervention group

Data Collection

• Control group: 11/29/2020-2/28/2021
• Intervention group: 11/29/2021-2/28/2022
• Statistical analysis: Chi-square test

Inclusion Criteria

• ≥ 18 years of age
• Primary or secondary COPD diagnosis
• Live outside of the Oregon and SW Washington region
• Cognitive impairment, dementia, or disabling psychiatric disease
• Patients transitioned to hospice or comfort care measures

Exclusion Criteria

• Patients who do not receive PTC services

PRIMARY ENDPOINT

Rates of 30-day readmission and 30-day ED visits for admitted patients with COPD

SECONDARY ENDPOINTS

• Number and nature of pharmacy interventions
• Compliance with guideline-directed medical therapy (GDMT)

OUTCOMES

30-Day Readmissions

Control

Intervention

30-Day ED Visits

Control

Intervention

REFERENCES


CONCLUSION

• Implementing a proactive workflow upon discharge was recognized as an area where pharmacists may optimize transitions of care
• A difference was not noted from implementation of this pilot PTC program
• PTC services from other studies were noted to have the potential to impact medication discrepancies upon discharge and reduce rates of readmission at 30 days

FUTURE DIRECTIONS

• Revisit caregiver education piece of PTC practice
• Facilitate understanding of PTC and relation to pharmacy services and its implications

DISCUSSION

Baseline Population

• Mean age ~65 ± 10 years with a slightly greater proportion of females; predominantly Caucasian descent
• Comparable comorbidities, vaccination status, and smoking status in both groups

Study Endpoints

• Admission medication history reviewed by pharmacy in 73.1% (IQR = 61.5%)
• Note: all other PTC services applied to the intervention group only
• Pharmacy residents made a total of 24 interventions
• Interventions made were accepted by the provider
• Discharge education was documented in 8 patients (20.5%)
• Discrepancies upon discharge were retrospectively noted in 9 patient discharges (23.1%)
• Discharge progress notes were signed and routed to the primary care provider (PCP) in 26 discharges (68.7%)
• No difference was noted in the primary outcome per chi-square test

CONCLUSION

• 30-day readmissions (8 vs. 9; p=0.2806)
• 30-day ED visits (10 vs. 13; p=0.0771)

Pilot Limitations

• Limited number of patients with COPD admitted for age of COPD exacerbation
• Discharge notification was insufficient for pharmacy to perform all PTC services prior to discharge
• Documentation highly variable with rotating pharmacy residents during the PTC shift
• Evening PTC shift does not overlap with that of the discharging team during the day

REFERENCES