Impact of Interdisciplinary Collaboration to Optimize Chronic Obstructive Pulmonary Disease Regimens During Exacerbation Admissions on Guideline-Directed Medical Therapy at Hospital Discharge

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St. Peter's Health

Background

Patients with chronic obstructive pulmonary disease (COPD) may experience acute exacerbations requiring hospital admissions. Providers, pharmacists, nurses, and respiratory therapists work diligently to treat these acute exacerbations while patients are admitted. However, appropriate escalation of COPD treatment regimens may be overlooked during discharge planning due to a limited inpatient inhaler formulary and questions regarding inhaler prescription coverage. Therefore, home COPD therapy adjustments are frequently deferred to outpatient providers. Proper disease management and control requires prompt optimization of guideline-directed medical therapy (GDMT) for patients experiencing acute exacerbations. The purpose of this project is to collaborate with an interdisciplinary team of hospitalists and respiratory therapy to create a pharmacist-led guideline with the goal of optimizing acute COPD exacerbation treatment using guideline-directed and cost-effective therapies prior to hospital discharge.

Pharmacist intervention in COPD therapy and inhaler technique positively impacts clinical outcomes.[1-5] COPD is a leading cause of morbidity and mortality in the United States with exacerbation readmissions occurring in about 1 in 5 patients within 30 days.[2,6-8] Suboptimal therapy and adherence of COPD management can lead to further deterioration of lung function and comorbidities. Thus, clinical pharmacists can provide expertise on appropriate guideline-directed medical management and proper inhaler technique to prevent COPD exacerbations, admissions, and increased healthcare burden.

Objectives

Primary Objective

- Evaluate the percentage of patients discharged on guideline-directed medical therapy for acute exacerbations of COPD

Secondary Objectives

- Evaluate the rate and reason for readmissions within 30 days
- Determine the number and type of pharmacist-driven interventions
- Assess utilization of the St. Peter's Health 340b program
- Analyze the number of prescriptions dispensed for COPD medications at the St. Peter's Health outpatient pharmacies
- Assess the percent of patients on maximum affordable GDMT on discharge
- Evaluate the total steroid dose to be received for each individual patient
- Review the time to inpatient therapy optimization
- Determine the number of patients referred to an outside provider upon discharge

Methods

Phase I: Development, August - December → Phase II: Implementation, January - March → Phase III: Data Analysis, April - May

Phase I: Project Development

- Background Research with Preceptor Team & Abstract Development
- Collaborative Meetings with Respiratory Therapy
- Development of Data Collection & Therapy Guidance Documents
- Collection of Retrospective Data

Phase II: Implementation

Pre-implementation

In current state, many patients admitted to St. Peter's Health for acute COPD discharge with the therapies they were admitted on. Appropriate escalations are not consistently being made to optimize outpatient medications for this group of patients. This project will assist providers, pharmacists, and respiratory therapists in choosing appropriate, individualized therapies during admission and at discharge for patients admitted for acute COPD exacerbations.

Post-implementation: Daily Workflow

Patient Identification:
Pharmacist: Screen for patients admitted with an active COPD exacerbation without exclusion criteria

Initial Assessment:
Pharmacist: Review patient's EHR for pulmonary function tests (PFTs), current medications, and adherence
RT: Assess inhaler technique and adherence, complete PFTs as needed

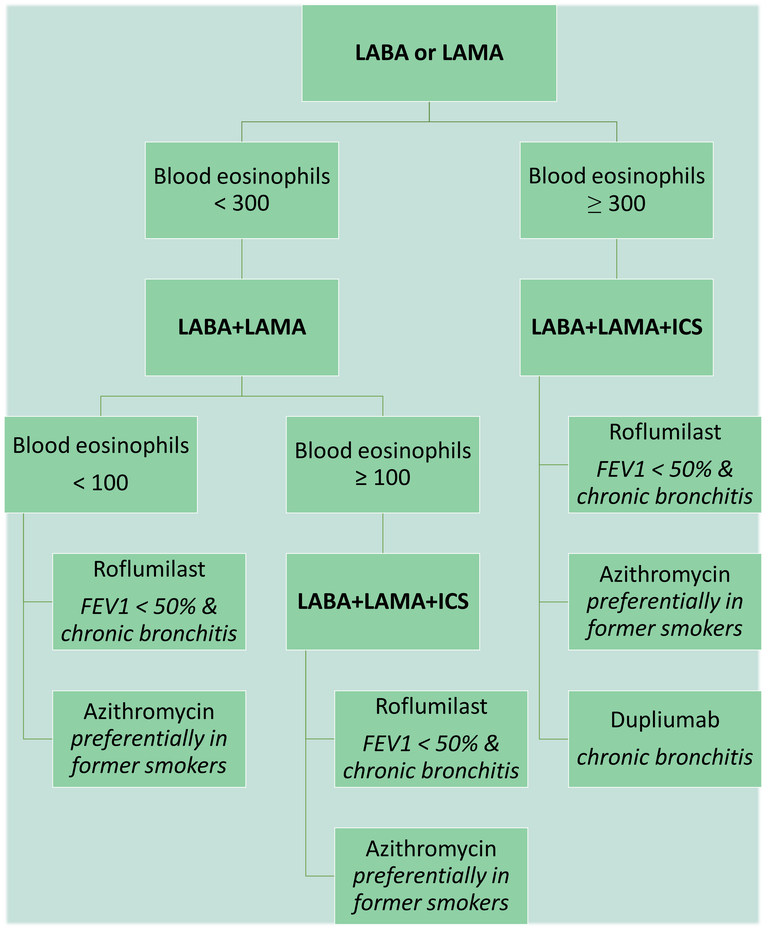
Medication Adjustment:
Pharmacist: Assess initial exacerbation therapy and recommend adjustments to inpatient and outpatient therapies
RT: Assess clinical appropriateness of medication delivery (nebulizer, MDI, soft mist inhaler, etc.)

Coordination of Care:
Pharmacist: Document recommendations to notify attending provider
RT: Contact pharmacy and document in the EHR for adjustments to medication delivery method needed

Preparation for Discharge:
Pharmacist: Queue outpatient prescriptions for provider signature
RT: Collaborate with pharmacy to ensure appropriate medication delivery method is chosen upon discharge

Documentation:
Pharmacist: Write daily notes which outline recommendations and assessments in the EHR
RT: Write daily notes documenting adherence and ideal medication delivery method

Therapy Guidance Flowchart Example



Phase III: Data Analysis

Assess
- Prospective data analysis

Compare
- Comprehensive data analysis of retrospective vs. prospective

Share
- Present findings

Author Disclosures & References

Authors of this presentation have the following to disclose concerning possible financial personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation: Kaylee Ashe: Nothing to Disclose, William Schroeder: Nothing to Disclose, Shea Fanning: Nothing to Disclose, Jada Cunningham: Nothing to Disclose, Kaitlyn Deaton: Nothing to Disclose