A Multi-Disciplinary Team-Based Initiative to Reduce Chronic Obstructive Pulmonary Disease Readmissions at Highland Hospital

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Introduction

The COPD Readmission Prevention Committee is a multi-disciplinary quality improvement committee at Highland Hospital (HH), a 260-bed community hospital in Rochester, New York. This committee works to reduce readmissions by standardizing inpatient care according to Global Initiative for Obstructive Lung Disease (GOLD) guidelines for management of COPD exacerbations and promoting comprehensive discharge planning.

Defining Our Metrics

Identifying Patients with COPD Exacerbation

-Does clinical documentation support readmission?
-Does level of care reflect indication for admission?
-Has COPD exacerbation severity been classified?
-Has RN care coordinator assessment been done?

Standardizing Inpatient Care

-Was appropriate inhaler therapy initiated?
-Were antibiotics used when clinically indicated?
-Were steroids used when clinically indicated?
-Was supplemental oxygen/NIPPV used correctly?

Planning for Discharge

-Did transition to MDI occur >48 h before discharge?
-Was the Zones tool reviewed prior to discharge?
-Did pharmacy inhaler teaching occur?
-Was vaccination status reviewed?
-Did tobacco cessation counseling occur?
-Does the patient have discharge follow-up?

Methods

Thirty-day COPD readmission data from HH between July 2021 and December 2023 were reviewed. Guideline failures with regard to numerous metrics were identified to better understand factors leading to re-hospitalization. Changes presented in a Clinical Practice Guideline update (CPGU) at the start of FY23 were used to assess for change in compliance over subsequent months.

Data

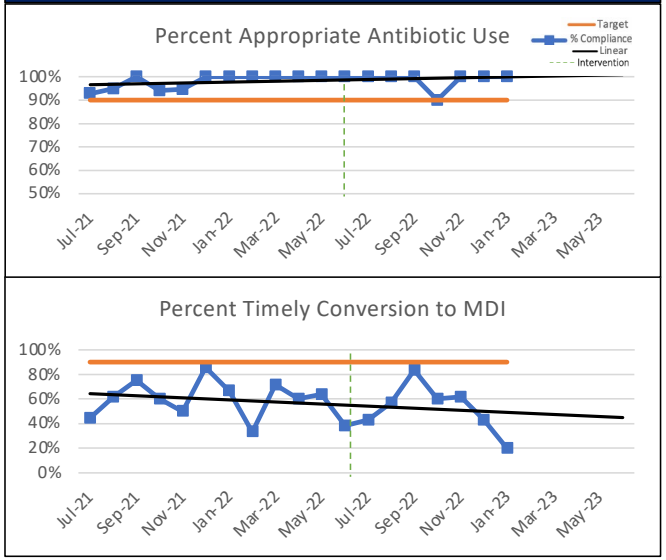

Figure 1. Run chart displaying percentage of COPD admissions per month in which antibiotics were indicated and given (top) and in which patients were converted from nebulized bronchodilator to metered-dose inhaler (MDI) therapy within 48 hours of discharge (bottom).

Results

There were 310 total COPD admissions to HH with 59 readmissions within 30 days of discharge. The average 30-day readmission rate was 19.0%, higher than target of 15.48%.

Readmission rate did not improve following the intervention. Metrics with the highest pre- and post-update compliance were appropriate antibiotic administration and smoking cessation counseling.

Pharmacist counseling, spacer education, and conversion to metered-dose inhaler (MDI) therapy within 48-hours of discharge were below target prior to FY23 and unimpacted by intervention.

Analysis

1. Metrics with the highest pre-update compliance were primarily related to treatment (ex. appropriateness of antibiotic and steroid use) and also had the highest post-update compliance suggesting adequate standardization.

2. Some metrics that did not improve following CPGU (ex. pharmacist counseling and spacer education) were primarily related to logistical issues.

3. Percent timely conversion to MDI represents an area of focus for further intervention and automatization of process may improve adherence and reduce readmissions.

References

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