

**Chronic Obstructive Pulmonary Disease:  
A Multi-Disciplinary Initiative to Reduce Readmissions at Highland Hospital**

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Chronic obstructive pulmonary disease (COPD) is a progressive disorder of inspiratory airflow limitation and expiratory air trapping that contributes substantially to global morbidity and mortality. As a consequence of its high prevalence and proclivity for acute exacerbation requiring frequent emergency department utilization, hospitalization, and ambulatory evaluation, COPD places significant economic strain on the health care system. It is estimated that 20% of patients hospitalized with a COPD exacerbation are readmitted within 30 days of discharge. Worryingly, this burden has worsened with the total annual cost of COPD care in the United States rising to nearly \$50 billion. Reducing COPD readmissions reduction has become a priority for health systems across the country, notably with its inclusion in the Medicare Hospital Readmission Reductions Program (MHRPP) in 2015.

A review of the literature suggests numerous interventions to improve COPD readmissions, including early identification of high-risk patients, standardization of care, and comprehensive discharge planning. The COPD Readmission Prevention Committee is a multidisciplinary Quality Improvement committee at Highland Hospital (HH), a 260-bed community hospital in Rochester, New York. This committee works to reduce readmissions by standardizing care and improving provider compliance with the Global Initiative for Obstructive Lung Disease (GOLD) guidelines for management of COPD exacerbations. An additional aim of the committee is to identify and assess compliance failures to guide future interventions. Thirty-day COPD readmission data from HH collected by the Quality Improvement department 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.

There were 310 total admissions to HH for COPD over this time period, with 59 readmissions within 30 days of discharge. The average 30-day readmission rate was 19.0%, higher than the target of 15.48%. Readmission rate did not improve following the CPGU. Metrics with the highest pre- and post-update compliance included appropriate antibiotic administration and smoking cessation counseling. Appropriateness of steroid administration, although not improved in FY23, generally remained above goal. 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 CPGU. These represent areas selected for further intervention.