Implementing a Pulmonary Rehab Phase One Inpatient Program in an Effort to Reduce 30 day Readmission Rates for COPD Patients

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Introduction

- COPD is a frequent cause for hospitalization readmission within thirty days of discharge\(^1\)

- Cost of COPD to the nation is $49.9 billion\(^1\)

- 50% of survivors of a first COPD hospitalization return to the hospital within six months\(^1\)

- Studies suggest pulmonary rehabilitation is an effective and safe intervention to reduce hospital readmissions and improve quality of life

1. COPD Alliance
Purpose

• To evaluate the effect of an inpatient pulmonary rehab phase one program on readmission rates

• The program initiates patient education and exercise instruction at the bedside during an inpatient stay

• Reinforcement of patient education should lead to positive outcomes
Design

• Developed by multidisciplinary team consisting of nursing, respiratory therapist, medical director, and exercise physiologist

• Patients will receive one to one instruction with a pulmonary rehab specialist
  • Developed education materials for bedside education

• Because inactivity has been shown to be a predictor of readmissions, light exercise that can be done standing, sitting, or while in bed are introduced

• With IT partner standardized assessment tool developed in EMR
Design

- Developed written education materials:
  - Breathing techniques to include pursed-lip breathing and diaphragmatic breathing
  - Energy conservation and work simplification tips
  - Exercises that can be performed while in bed, seated or standing
  - Review symptoms of COPD and COPD warning zones as part of action plan
Methods

• Every patient with a diagnosis of COPD receives automatic referral for phase one through EMR

• Each patient receives a consultation with a nurse, respiratory therapist or exercise physiologist who specializes in pulmonary rehab

• This was a collaborative effort with bedside nurses, transitional care nurses, and nurse educators

• All patients identified were referred to the outpatient phase two program
Results

• 22 patients were counseled in the pilot program

• 86% were not readmitted within 30 days for AECOPD

• 31% attended the phase 2 outpatient program further reinforcing education of their disease, compliance with exercise, and recognition of warning signs
Conclusion

- We are encouraged by the initial outcome data of our pilot
- We will extend the program to determine the long term effects on readmission rates

- We anticipate we will achieve these results:
  - Long term reduction in readmission rates
  - Improved overall functional capacity of the patients
  - Increased referrals of the outpatient phase 2 program
  - Increased compliance in completing the phase 2 program