Enhanced Discharge Process to Reduce 30-Day COPD Readmission Rates

A Quality Improvement Project

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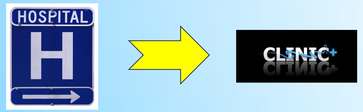
Introduction

- 30-day hospital readmissions occur in 25% of Medicare's population
- Current hospital discharge processes that are inconsistent, disorganized, and/or fragmented can lead to readmission
- In 2015 – COPD included on CMS' list of conditions with reimbursement penalties
- *Organizations must consider process change(s) for continuance of safe and effective care delivery & financial viability of resources*
- Needs Assessment:
  - National COPD readmission rate = 22.4%
  - Organizational historical COPD rate = 19.7%
  - No current standard for COPD discharge process
  - CMS targeting 20% readmission rate reduction
  - Places organizations at risk for CMS reimbursement penalties
  - Need to reduce organizational rate to 15.8% or 3 admissions to meet CMS goal

Background:Study Purpose and Aims

- **Purpose:** To reduce 30-day COPD readmission rates by improving transitional care through the re-design of the current discharge process to include comprehensive education information, discharge checklist, and post-discharge phone calls



- **Primary aim:** To reduce 30-day COPD readmissions by 20%
- **Secondary aims:**
  - Increase COPD therapy compliance ≥ 60%
  - Increase knowledge retention ≥ 40%
  - Decrease financial burden of COPD readmission

Methods

- *Design*: prospective longitudinal intervention project with contemporary comparator group
- *Setting*: Rural hospital in lower Alabama from February 11, 2013 to May 15, 2013
- *Patients:* Age 19 and older with a primary or secondary diagnosis of COPD assigned to Elberta Family Practice physicians
- *Intervention*:
  - 20 minute educational session with comprehensive patient self-management information and discharge checklist with discharge instructions for patient that included medications, therapies, and follow-up appointments, and documentation of patient understanding of education
  - Three post-discharge follow-up calls at Day 2, Day 14, & Day 30
- Data Collection:
  - Utilized discharge checklist for call script
  - Same questions used for discharge and follow-up calls
  - Patient reported and chart review for verification
- Data Analysis
  - Quantitative data
  - Simple descriptive statistics
  - Compared to national, historical, and literature benchmarks

Results

- A total of 41 patients were included in the study
  - Interventional cohort: N=16
  - Non-interventional cohort: N=25
- COPD re-admission rate
  - *Interventional cohort: 12.5%*
  - Non-interventional cohort: 16.0%

Results (continued)

Table 1. Demographics.

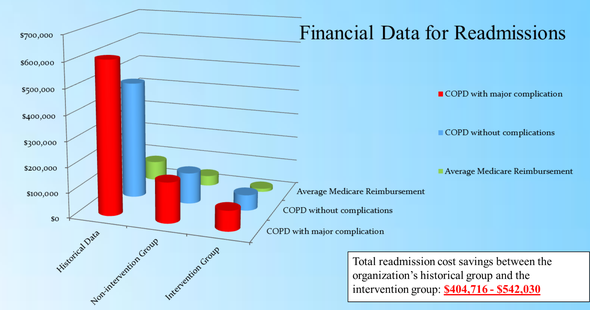
Demographics		
	Intervention Group N=16	Non-Intervention group N=25
Gender		
Females	81.3%	52.0%
Males	18.7%	48.0%
Race		
Caucasian/White	100.0%	100.0%
African American/Black	0.0%	0.0%
Hispanic/Latino	0.0%	0.0%
Other	0.0%	0.0%
Average Age	66.6%	66.9%
Average length of stay (days)	5.7	9.1%

Table 2. Compliance assessment for key factors at Day 2, Day 14, and Day 30.

Compliance			
	Day 2	Day 14	Day 30
Medication	100.0%	87.5%	75.0%
Oxygen therapy	100.0%	100.0%	90.0%
Pulmonary rehab	NA	NA	NA
Proper use of inhaler	100.0%	100.0%	93.8%
Smoking cessation/reduction	21.4%	43.8%	43.8%
	Yes	No	
Follow-up appt	75.0%	25.0%	
within 1 week of discharge	37.5%	62.5%	
within 2 weeks of discharge	50.0%	50.0%	
Diagnostic follow-up	12.5%	87.5%	
within 1 week of discharge	100.0%	0.0%	

Table 3. Knowledge Retention for key factors at Day 2, Day 14, and Day 30.

Knowledge Retention				
	Discharge	Day 2	Day 14	Day 30
Common S/S of COPD	71.3%	67.1%	61.6%	62.5%
Symptoms Recognition				
Yellow Zone	42.6%	33.1%	35.2%	31.3%
0 symptoms	0.0%	0.0%	0.0%	0.0%
1 symptom	0.0%	0.0%	0.0%	6.3%
2-3 symptoms	31.3%	50.0%	33.3%	43.7%
4-5 symptoms	56.3%	50.0%	60.0%	43.7%
5+ symptoms	12.5%	0.00%	6.67%	6.3%
Red Zone	59.4%	56.0%	56.7%	54.2%
Actions for flare-ups	63.5%	60.7%	58.6%	59.4%
Oral thrush prevention	100.0%	100.0%	100.0%	93.8%



Conclusions/Discussion

- Although the intervention group reached the 20% goal, no statistical difference was noted in the readmission rate when compared to comparator and historical rates
- The project showed a positive impact on improving transitional care and decreasing readmissions as evidenced by the overall compliance and knowledge retention rates above the defined goals (≥60% and ≥40%, respectively.
- Results should be viewed in light of limitations:
  - Small sample size and Non-randomized design
  - Hawthorn effect and reporting bias
  - Unmeasured confounders and potential misclassification of patients

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